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THE PSYCHASTHENIC STATES*

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It is the classifications of Kraepelin and of Krafft-Ebing which best accord their proper degree of importance to the psychoses of exhaustion, those psychoses which arise upon a neurasthenic basis. And, in practice, it is not infrequently that the clinical picture of neurasthenia, with the syndrome of physical fatigue chiefly in evidence, gives place to states in which mental instability, perhaps, rather, mental inability and easy mental fatigue bulk most largely.

The causes will not especially concern us here, but the trend of the age toward living at high tension, the tendency to over-do, to work without rest or play, to emulate that pressure exemplified by the speed-struck sight-seer, the fashionable frivoller, and the horde of lesser lights who ape these and seek to be their satellites, all contribute to that never ending stress which so greatly strains the integrity of nervous and mental balance and inevitably strands a certain number upon those rocks and shoals which await the nervously unstable.

Responsibility is to be traced to a forsaking of the simpler paths and to the false and shallow views of life which emanate from the worshippers at the shrines of false gods. Life is regarded as a well of amusement and pleasure, out of which each is to drink, at however dear the cost, the deepest possible draught. An unstable nervous organism is not at all reckoned with, nor does the nervously defective take heed to his ways, although, given a personal equation unstable upon the nervous side, the result, by proper training and education may admit of the leading of a useful life within normal limits, while a sound nervous system gives one a basis which is to be upset only by the strongest buffetings and a straining of its strength to the utmost.

Happily, the mental are less common than the physical phases in most of these lapses from nervous integrity, yet of sufficient frequency are these psychasthenic cases to make it most important that their clinical significance be duly appreciated and their relations to other forms of insanity nicely discriminated.

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It goes without saying that we are not primarily dealing here with the grosser insanities, those having an undoubted underlying organic basis, save as they are to be differentiated from these functional conditions.

Anxious friends are often more concerned as to prognosis than they are as to diagnosis and treatment, and this will of course largely depend upon a nice appreciation of the real pathology present. What, then, are the psychasthenic states, what their distinguishing features and how are they to be differentiated from other psychoses?

The hysterics are here, and here, too, are the neurasthenias, that is to say, those cases in which the psychopathic phase is most to the front and physical signs less in evidence than the mental, conditions where nerve tire and nerve imbalance are shown chiefly in disordered psychic centers. The various phobias, agoraphobia, claustrophobia, and the like are frequently found here, and, indeed, the clinical aspect is one of distressing self-centeredness. That annoying class of patients, who, metaphorically speaking, ever have their finger upon their pulse, who are sure they have syphilis, consumption, organic heart disease, or Bright's disease, and upon whom your repeated assurance of the utter absence of anything even pointing toward the confirmation of their fears makes no impression, affords many illustrations of the psychasthenic states and though the road to recovery be many times a weary one, a satisfactory result makes its travel worth while. I shall cite later on one or two examples of that miserable class whose disordered mental plane seems to be not above the persistent consideration of the genitalia and whose obsessions make them assured that they are in some way or other sexually doomed.

The unfeeling and long-suffering have not inhibited their disposition to denom-

inate as "cranks" many who are properly registered in this class, the eternal arguer, who argues, too, to no purpose, the man who needs to be assured and reassured that his head is not one-sided, the fusser, who must have everything arranged in a certain way and who really never sees anything in order but wears himself out in an endeavor to put to rights this disorderly world, the would-be dyspeptic who is sure that everything he eats has disagreed with him. These are psychasthenic, some to a greater, some to a lesser degree. So miserable are some of these patients that suicide is talked of, but happily this usually ends in talk and seldom does a psychasthenic patient make a seriously suicidal attempt. Serious mental application is out of the question. There is inability for serious and long continued mental processes and this mental inability is often a source of great distress. Inability to decide anything, even the simplest course of action, produces a state of vacillation, often painful to see and which dominates the mental life and leads to mental confusion and despair. A great danger from this condition is that more or less mental apathy and lack of vigor may persist if the departure from the normal has covered any great length of time, though happily many recoveries are entirely satisfactory.

On the mental side, we frequently find, as the more common chief points of departure from the normal, the marked irritability on slight provocation, the easy mental fatigue, in some cases going almost to the extent of mental confusion, frequent depression and more especially a persistent and extreme self-centeredness. The physical side of the canvas presents various neuralgias and a legion of aches, pains and tender areas, an inability to sleep, a feeling of languor and easy physical fatigue, reflexes generally increased, sundry paresthesias, formication, numbness, etc., much gastric and

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intestinal fermentation, constipation alternating with periodic diarrhoeas, and a resulting impaired nutrition, a diminution of sexual appetite and power and varying irregularities of pulse.

Not a hopeful picture, and yet there is here ample ground for such hopeful outlook as to make the study of these cases well worth while and their judicious management a matter of the greatest satisfaction both to physician and patient.

Some cases will serve to illustrate certain points:

I.—F. E., age 20, an architect's assistant, who has been working very hard and uninterruptedly. Save that his paternal grandmother was at about 40 mentally stirred up about religious matters and for a time an inmate of an asylum, his family, as also his personal history, is negative. He gives an account of easy fatigue of late, but he has changed much mentally, displays much tremor and hesitation, his mental aspect being so vacant as to give rise to possible suspicions of dementia. He says he is much bothered by "foolish, wandering thoughts" and an utter inability to long concentrate his thoughts upon any work. His appearance was quite pathetic.

A regulation of his daily life, even to the laying down of a daily program, with stated periods of rest, exercise, and his daily wet-pack, with prohibition of all mental work, attention to elimination and the administration of appropriate tonics, made a different boy of him within two months, and after three months he was happy in cautiously resuming his work. He has remained well.

II.—S. G., a tailor, native of Russia, age 32; family history negative; has been greatly worried over domestic troubles, but has struggled against depression. He is weak, languid, of flabby appearance, easily fatigued on either physical or mental exertion, presents a simple, common picture of nervous and psychic asthenia. Improvement was slow.

The following were of that class of cases which seemed to revolve about the sexual:

III.—G. M., age 18, a farmer's son with negative family and personal history, seemed on first examination to be mentally more than lethargic and hesitated and said: "Can't think now," when asked to give me a history of his case. His father had noticed that for six weeks he had been abnormally absorbed and he had been seen sitting on the edge of his bed contemplating his genitalia in a deep, brown study. He has a good color, and a sturdy development, but responds timidly or not at all to questions addressed to him, finally saying that the boys were "all against him." Though his mental reflex is distinctly dulled, he can correct his persecutory ideas and admits that they are baseless.

A hard bed, regular physical exercise, circumcision and cure of his varicocele, a cold morning sponge bath, regular work in the society of others, was shortly successful in restoring this husky farmer to a normal mental tone.

IV.—F. H., a teacher and a college graduate of 29, whose parents were of neurotic temperament but whose family and personal histories were otherwise normal, was pale and timid in appearance, with clammy hands and an expression which told of distress and despair. He handed me a paper on which he had written his confession of sexual excess and abuse and to which he appended a pathetically underlined inquiry asking if for him there was hope. He had not been able to sleep for more than from one to five hours a night of late. He has taken more or less chloral. Has worked hard during the college year and through his summers, has allowed himself no adequate rest. Pupils are large and patellar reflexes quick. He has been able to correct thus far some mild delusions of persecution. Regulation of his physical exercise, cold baths, with an interdiction of mental work and later transference to the regular work of a farm life was entirely successful in restoring this patient to his normal state.

V.—B. S., 29, a draughtsman, comes of neurotic stock, looks the picture of health, but complains that for three or four months he has had pain in the back and head and at times is so restless that he cannot apply himself at all to his regular work without suffering for it. He worries constantly, has no decision, is hardly able to decide to go to work or to the doctor. He asks the cause of his trouble, asks if he has not "kidney trouble" and "liver trouble," and "disease of the stomach;" asks if his masturbation as a boy is responsible for his condition and wishes to have

his genitals examined, is sure that they are atrophying and "all withering away." He cannot accept my assurance that his organs are entirely normal. He followed directions badly and made only a slow and partial recovery.

VI.—The mental asthenia is well shown in the case of D. M., a salesman, age 48, who has worried and brooded some over business changes in the last six months, but of late little things have worried him much more than larger affairs. He is continually reproaching himself that he has not done otherwise, ever regretting that he has done as he has, bemoans his errors and yet is unable to correct any of them. If he starts to cross the street, he is so vacillating as to be unable to decide to carry out his purpose. He so lacks in decision that he accomplishes practically nothing. Though he bemoans and regrets, there is no deep depression and no temptation to suicide. By dint of great moral bracing he was able to follow out in a half-hearted way a program of treatment laid down for him, but through it all he "kicked," argued, regretted, declared that he would not do the things advised, but did them and improved in spite of himself. He is typical of the indecision and vacillation so often in evidence. Much may often be done for these cases and the treatment is quite as much moral as medical.

The following case was strongly suggestive of dementia praecox, but the early and apparently satisfactory recovery has raised some query as to whether it is not more properly a psychasthenic case:

VII.—A young woman of 20, who once in childhood developed some imperative conceptions which later disappeared. She has been a diligent student through the secondary school, preparing for college, and at the same time doing special and most creditable work in music. Her paternal grandparents broke down at 70 and 73, a brother is a subject of an infantile paralysis, and she has been a bit peculiar. She is a good example of a neurotically inclined girl whose ambitious parents, had they followed the part of wisdom, would have curbed her developing powers instead of pushing her beyond the limits of her abilities. She should have learned to make haste slowly, but after finishing the work of a girls' school, she continued in post-graduate work, and then, though her

health had been somewhat precarious, went to an eastern college. Though she remained there two weeks, she did not unpack her trunk nor settle her fees, though she repeatedly started for the office to do this. She had a feeling that she could not stay, regretted that she had come, and was much relieved on receipt of a telegram which bade her return home, whither she went at once, seeming at first quite like herself for the most part, aside from her disposition to lie still and see no one. This continued for a month or more when I saw her. She was then much in bed, restless, sleeping poorly, unable to express herself clearly, apparently losing the thread of a sentence before she had finished. She appeared as if confused and as if failing to express herself either on this account or because of some sort of inhibition. She talked rather vaguely and disconnectedly. Negativism was markedly present. She resists answering questions, resists assistance to get up, resists taking medicine, resists going out. She did badly at home, was depressed, talked of suicide, and continued in this state of constant negativism, her removal to a private hospital in the country being accomplished only by force, though she went quietly when once started. The same condition continued here for a time, but improvement once begun was steady and satisfactory. She has now been several months at home and apparently perfectly well, the institutional environment, with the careful hygienic and tonic regimen having supplied that of which she was so much in need.

Case VIII illustrates some difficulties in diagnosis from other psychoses. It is that of a young woman of 27, a college graduate whose family history is negative. She has always been healthy and well. She had a slight digestive disturbance and became an appendicito phobist. She had only at 27 begun to discover that her life was idle and self-centered and she became wakeful and despondent, on great mental tension and inclined to reproach herself. She declared that her memory was greatly impaired, but conversation showed no evidence of it for either recent or remote events. She declared that she was unable to receive much impression from reading and was unable to apply herself; said she felt stupid and dumpy and that her "mind was slipping away from her." Her pulse was 96 to 100, heart sounds and temperature normal, reflexes quick. She is greatly self-centered, fatigue is mental rather than physical. A note made at the time of my first examination recites that she is "much more mentally than

physically asthenic." Her failure to follow out measures laid down for her and her refusal to do as wished led her rather reluctantly to go to a private hospital where she remained some three months. She was but little if any better on her return home, was self-centered and despondent and finally went to another institution where a second suicidal attempt was successful and closed the tragedy of the case, which was probably one of dementia-precoc.

The diagnosis is by no means always always easy, since psychasthenic states may precede and lead up to other and less hopeful psychoses, playing the role of a preliminary stage thereto. As a rule, the mental condition is a more stable one in the psychasthenic states than in dementia praecox and the neurasthenic or psychasthenic patient usually more clearly understands the conditions actually present. The early stages of paresis afford some cause for possible confusion, but the physical stigmata of paresis will usually soon remove any difficulty.

The treatment should be judicious, but need not be obscure nor complicated. A tactful judgment is necessary in the decision as to whether the case demands institutional care or is likely to do better in the presence of such environment and regimen as can be provided outside of an institution. That anomalous class of hospitals can, I think, be justly viewed with suspicion, which solicits cases of

disease of the nervous systems, yet claims to bar its doors to all mental cases, for these are cases often on the border line, some of which could be committed without hesitation as insane and others of which one could hardly or wisely say were distinctly insane. Indeed, the institution with the moral support of its daily regimen, its tonic and eliminative treatment, its hygienic life, is a veritable God-send to some patients, supplying the very moral brace which their cases imperatively demand.

From the allusions already made to the therapy of these cases it will be rightly inferred that this is by no means a matter wholly or largely of drugs. While these have their proper place, the moral treatment, encouragement and suggestion, the support of regular living and a wisely planned daily program, which shall not omit proper hydro-therapeutic measures, constant attention to the eliminative functions, the securing of proper sleep at night and rest during the day, and a moral education as to proper modes of living—all of these are of far greater importance than the seeking of specific drugs or of any shorter path to the normal state.

Patiently, judiciously, tactfully, and wisely followed, such a course in a large number of cases leads to the happiest of recoveries and proves a source of the largest satisfaction to both physician and patient.

Post-operative hemorrhage from the base of the bladder that proves inaccessible to ligatures, and uncontrollable by packings, may be checked by the following method: Through several thicknesses of gauze, cut in square, pass a double strand of heavy silk or of twine fastened on a stout needle. With the patient in Trendelenburg's position and the bladder widely opened, thrust the needle from within directly through the perineum, and bring the gauze firmly against the bleeding surface by pulling upon the threads, which are then to be fastened to an outside dressing.

Subiodide of bismuth dusted on an oozing granulating wound promptly stops the bleeding. It is also an excellent stimulant to the growth of epithelium.

Collodion, commonly used to seal a puncture wound, as after aspiration, will not adhere if the spot is wet or bleeding. To obviate this, pinch up the skin, wipe it dry, apply the collodion and continue the compression a minute or so until the collodion has begun to contract.

ONE YEAR'S EXPERIENCE IN THE HOME TREATMENT OF TUBERCULOSIS*

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A general objection which may be entered to this paper at the outset, and one which bears force in its trend, is that no one has any right to base any conclusions on one year's experience in a disease such as pulmonary tuberculosis, whose element of chronicity is greater than in almost any other disease with which we are acquainted. I beg to meet this objection at once by stating very frankly that I have no remarkable cures to announce in favor of such treatment, nor any disastrously fatal results, which might be used as an objection to such a line of treatment. What I desire to do is to give a frank statement of work done during the year; of success achieved, of failures resulting; to analyze as carefully as may be the cases as they are recorded, and to seek to draw lessons from failures as well as from successes.

It is hardly necessary to reiterate what has been said over and over again, that probably 98 per cent of our cases of tuberculosis, both of the lungs and of other tissues, must be treated at home and treated by the family physician. The very small minority of about two per cent may, on account of their social and financial standing, or on account of a happy combination of circumstances, find themselves able to change their place of abode, and desist from all work while seeking a cure. Of the two per cent approximately who can do this I have nothing to say. Their numbers in

the first place are too insignificant to consider, and their opportunities for feeding, for alternating their places of abode, consistently with climatic changes, and for keeping themselves constantly stimulated by change of environment, all tend to make them comparatively easy patients to treat, and, if they are at all amenable to discipline, to cure.

The most of our cases of tuberculosis occur, as is well known, among the middle and poorer classes. Most patients must support themselves, and likewise frequently support several of their immediate family, while they are undergoing treatment.

Let us say then as preliminary that about 98 per cent of all cases of tuberculosis of the lungs must be treated at home, and that of the 98 per cent about 80 to 90 per cent must support themselves as well as aid in supporting others.

Fortunately for us as physicians, and fortunately for our patients, it has been discovered by incontrovertible experience, that many cases do better at home under the care of their own family physician, with the judicious, loving attention of kindly relatives, than away from home, either in a sanitarium with strange surroundings, or in an ideal climatic environment where conditions for obtaining necessary food and for securing necessary funds are notoriously bad.

A change of opinion in this regard has come with remarkable rapidity during the last ten years. Ten years ago it was

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thought extremely 'inadvisable for any tubercular patient to remain in his home climate; while now the belief is that, generally speaking, the patient does better to remain in his home environment, providing his case is taken in charge early enough. The general feeling is, moreover, that a person cured in a remote region, and in a high altitude, and with dry air, must constantly remain in those surroundings and under those conditions to maintain the cure. Life in such environment might not be at all unpleasant, were it possible for an ordinary artisan or workman to secure a livelihood there, but as is well known the favored region for tubercular patients is the region of aridity, such as the mountains of Arizona and New Mexico, or the sands of California and Florida. There a man has difficulty in living some times with wealth at his command, while one depending on the labor of his hands to maintain life is sure to starve.

Let us state here likewise, also as a reiteration, that the treatment of pulmonary tuberculosis resolves itself into the treatment of general mal-nutrition. A poor climate, with excellent food and cheerful surroundings is inexpressibly more to be desired for a tubercular patient than an ideal climate with poor food and cheerless surroundings. Let it likewise be stated here, that it is not so much a matter of climate, or particular kind of air, or particular altitude in which that air is inspired, as it is *air* itself. In other words, if we can get our patients to live outdoors in the climate of Detroit or Michigan, and at the altitude of those points in which they reside, they are to all intents as well off as if they were living outdoors in the altitude of Tucson or Santa Fe, and with the ideal sunshine of that location. Of course, it is very much more comfortable for a person to live outdoors twenty-four hours out of twenty-four with a climate

such as those places I have mentioned in the southwest, than for one to do the same thing in the climate of Michigan, where one day you may see the thermometer at 90, and a week after may find it shivering around 30. Moreover, the rainfall is much greater in our own neighborhood than it is in the points west, and that would **naturally**, of course, drive people indoors. However, with suitable shelter, and with a little insistence, and with the proper clothing, and the proper direction from the physician, fresh air can be obtained in abundant volumes, and will do **practically** as much good here in Michigan as in the arid regions of the southwest. If, moreover, there can be found anything more pathetic than the picture of a sick tubercular man away from home, away from friends, unable to participate in the several activities of his surroundings, becoming morbid, losing heart, losing strength, losing shortly life, in these unwholesome environments, then I have not seen this more pathetic picture.

Like every other physician, I have been enamored with this climatic cure of tuberculosis, and realize to its fullest extent the exhilaration which comes from an increase in altitude, and the blood changes which are so beneficial from such altitude. It is hardly necessary to remind you of the recent discoveries in regard to the increase in the haemoglobin and in the corpuscular elements of the blood which come from high altitudes. I have been, however, forced like other physicians to the conclusion that for all practical purposes, as I have suggested before, the great bulk of our patients must be treated at home. And since we know that the quatrain of *fresh air, sunshine, abundance of food, and rest* are the essentials which go to the cure of tuberculosis, and since these can be obtained at home as well as, or better than, in a remote region, so I have adopted the home treatment of tubercu-

losis as the ideal one in handling this disease generally. For certain well-selected cases I should still recommend a climatic change with a high or low altitude to suit the individual case, or I might in certain well-selected cases even recommend an ocean voyage, or a residence in a lumber camp among the pines, but these cases would be in the great minority.

Could these truths be forced home to every physician in the land, and could every physician be taught that it was necessary that he should give these cases special, and continuous, and always encouraging care; stimulating by every means in his power the *hope* for a cure and belief in a cure, which are, I believe, among the chief essentials for a cure; could, moreover, every physician in this land be induced to watch for these cases of tuberculosis, to be on guard for them, to seize them at precisely the psychological moment, i. e., the period when the lung has not become seriously invaded, but when the pre-tubercular manifestations are well marked: and could he obtain from his patients acquiescence in his demands for a scientific anti-tubercular treatment, then I believe that in a few years this disease, this dreaded white plague, will have become changed, and we, who view so sadly the possibilities of cure in cases coming under our observation late in the disease, would have our sorrow changed to joy in the reception of cases always in the early stages and thus always presenting possibilities for a permanent and complete cure.

And in this connection I may be permitted here again to emphasize that which I think is too sadly and too generally overlooked, and that is that if we desire to cure tuberculosis it is absolutely necessary that the cure should proceed from the early stage of the disease. Taken early there is no disease more

curable; taken late there is no disease more hopeless.

Let me emphasize this fact still again, because I feel that it is one not recognized by the very men who should recognize it, if we wish ever to stamp out this plague, viz., the great body of general family practitioners, who see these tubercular cases always from the first and usually in their pre-tubercular stage, the stage when the patient is ailing and sickening and preparing the soil for the reception of the pathogenic germs.

With, then, the disease properly diagnosed, and with the physician in charge possessing a full understanding of the principles of modern scientific treatment, it is incumbent upon him that he take into his fullest confidence the patient who is suffering from incipient tuberculosis; that he lay before the patient the true inwardness of the situation; that he insist upon his clearly understanding that he is a victim of tuberculosis; that according to modern scientific belief this is a curable disease; that the cure rests largely with the patient himself; that his cure must proceed at home and under the care of his family physician; and that the treatment will extend itself not over days or weeks, but over months and years. Let him understand fully, moreover, that it is the belief of the physician that with proper co-operation on the part of the patient, the possibilities for cure are excellent. With a proper understanding of the situation, such as I have enunciated, it becomes an easy matter to treat the patient. There is no hiding from view the diagnosis, no surreptitious whispering to the friends, no ominous shaking of the head, no equivocation which may excite the suspicion of the afflicted one, but a frank, free, honest understanding between physician and patient. With such an understanding I think all of us will agree that the situa-

tion is greatly simplified and the cure wonderfully hastened.

Let me now recite some cases that have been under my care during the past year. I have had under observation in all eight cases during that time. One of them has passed from under my care into the hands of another physician and is about to die. I saw her first about November last. She was a young married woman, and had a large area of tubercular consolidation at the base of the right lung posteriorly. She had been for some time under the care of one or two other physicians, but as I gathered from the patient, she had received practically no treatment beyond a little cough medicine. The case had been contracted from her brother, whom I attended for a few weeks last July and who died in August, 1906. She was not a good patient to treat, being unruly and flighty, and seemed to be wholly unable to comprehend the truth of the situation. I was very emphatic in regard to certain things being done if she wished at all to be improved, and there coming a sharp disagreement between the patient and myself I retired from the case after a week or two of treatment. My successor in the case I fancy found things equally bad, and was able to do but little for her.

The remaining seven cases I will discuss seriatim.

Case I is a young lady aged 25, a stenographer and bookkeeper by occupation. Came under my care a year ago last March. Her brother had died of tuberculosis a few years before, but with that exception there was no family history of the disease. This brother believed he had contracted the disease from a fellow workman. She had always enjoyed good health until a few weeks before her first visit to my office. A persistent cough for three or four weeks brought her to see me. I could find no well marked lesion in the lung, but an examination of the sputum showed tubercle bacilli. The patient showed a constant slight rise of temperature of about a degree in the evening.

She had good digestion but an exceedingly poor appetite, an appetite which seemed hard to "whip into line." Although she had a cough for only about three weeks, she had been tired and languid and weary for about two or three months, but thought nothing of it. She was ordered to discontinue her work entirely until the temperature became normal, which result was accomplished within about two weeks. Through the kindness of her employer at that time she was permitted to get away to some friends in the country for a prolonged stay. There the appetite improved rapidly, and the patient commenced to put on flesh quickly under forced feeding. The treatment consisted in rest in the open air for practically the twenty-four hours out of twenty-four, except when weary of resting she was permitted to take very moderate exercise. As soon as weariness supervened she was ordered to rest again and to regulate her exercise entirely by her desires. At night time she slept indoors, but had half the window removed so that the air circulated freely and constantly over her bed. She was warned to fear foul air rather than drafts, and proved in this regard as well as in all others an admirable patient. The diet consisted of an ordinary nutritious mixed one, with the addition of raw eggs in the form of an egg oyster, to the extent of from 2 to 6 or 8 a day (depending on her ability to digest them), and as much fresh milk as could be taken, usually about a quart a day. After about two months in the country she returned to her work here in the city and has pursued it for now almost a year with hardly a day's remission. She has gained twenty-four pounds in six months. Her cough has almost entirely disappeared, but the sputum still retains a moderate number of the tubercle bacilli. Her general health is good and she is able to handle her work perfectly well.

A peculiar complication occurred in this case which is worth considering for a moment. This patient, as I stated before, was an admirable one, and followed out the directions for forced feeding to the letter. Several times she forced her feeding beyond her limitations and developed acute gastritis, with inability to take any food for a week or two. I had warned her to be careful in this regard, but on account of her large gain in weight, and her general well-feeling and well-being from that treatment, she persisted in a forced dietary several times after this, even when her appetite was practically nil. The result has been that only a month ago she developed a horribly nasty case of gastritis and has never been able

to take food with relish since. This has taken off about five of her twenty-four pounds gain and has discouraged the patient somewhat. It will, I think, however, be a useful lesson to her to teach her to moderate at times her forced diet. Despite this the general condition of the patient may be considered excellent.

Case II is a young unmarried man, 27, an expert accountant. He is a slight fellow, 5 feet 4½ inches high, and weighs 114 pounds, having lost 12 pounds in the last year. His family history is good and his previous health has been likewise good, except that during the past year he has suffered with a cough and with this loss of flesh mentioned above. He has been under the care during the past few months of a physician who is unfitted to care for patients. The patient's temperature was almost constantly about 100, pulse likewise 100, cough fairly constant, free mucopurulent expectoration, appetite poor, and coldness of all the extremities pronounced. Exploration of the chest disclosed a large area of infiltration over supra- and infra-clavicular regions of the left lung anteriorly. Tubercle bacilli were present in the sputum in large numbers. This patient was treated almost exactly as the first case recorded. He did badly, however, in the country, developed diarrhea, and felt that he was losing ground. He returned after a few weeks to the city and has not left it since. Although he lived upon a noisy car line, with the dust of the street constantly disturbed and blowing in upon him, he nevertheless spent most of his time upon his veranda or taking short walks around in the neighborhood until his temperature became normal, when he was permitted to take more exercise, and after the lapse of a couple of months to return to his work. He has worked steadily since last November, has maintained the weight which he gained during his months of rest, namely, 13 pounds, has a constantly normal temperature and feels generally in fairly good health. I cannot see that the lesion in the lung is markedly changed, although I believe it has somewhat lessened in area. He developed, February of this year, a rectal fistula, which has added to his troubles, but it does not seem to have depleted his general vitality. The patient feels himself to be a fairly well man.

Case III.—A young married woman aged 22, 5 feet 8 inches high, and 113 pounds in weight. Her family history is good and her own previous record is likewise good, except for an attack of neu-

rasthenia four years ago, which was relieved within a few months. The patient came under my observation following an attack of typhoid fever in her husband. She was ill while she was nursing her husband, and her husband's case being a somewhat complicated one, little attention was paid to her until after his recovery. Careful examination then disclosed that the cough and difficulty from which she suffered was due to a tubercular infection, the chest exploration disclosing infiltration of the upper lobe of the left lung in front, and sputum examination showing tubercle bacilli. She was treated almost exactly the same as the other two cases, and has done fairly well. She has gained 9 pounds in the six months she has been under treatment and has maintained this weight despite repeated attacks of indigestion and diarrhea. She is a somewhat hard patient to handle, inasmuch as she becomes morbid and melancholy upon the first appearance of any slight adverse symptoms, and has to be constantly stimulated by suggestion and buoyed by hope. She, however, expresses herself as feeling much stronger and better than when coming under treatment six months ago, enjoys a fairly good appetite, takes from 2 to 4 raw eggs daily in addition to her mixed diet, but balks entirely upon milk, being unable to drink any of it at all.

Case IV.—A young married woman of good family and excellent connections. She has one child aged 18 months, who has been under my observation for the past year, being a case of difficult feeding and a case representing a lot of care on the part of the mother. The lady herself has been a patient of several other physicians, and came under my care only last December. She is tall and slender, 5 feet 7 inches in height and weighing only 105 pounds. I found her suffering from a severe attack of neurasthenia, being morbid, melancholy, exhausted by the slightest effort, unable to eat, irritable and generally sick. These symptoms she believed were due to the fact that she had "gone the pace" of society during the previous year, indulging in many of the foibles and a few extravagances of the social life of a large city. In this I was inclined to agree with her. She complained likewise of a slight cough but attached little importance to it. I was suspicious of the cough, however, examined the sputum and found tubercle bacilli to be present. I likewise examined the chest carefully, but was unable to locate any point of infiltration in either lung. She was given the Weir-Mitchell rest cure for neurasthenia, a cure which, by the way, was

likewise admirable for her tuberculosis, consisting of rest, massage, fresh air, and forced feeding. Under this treatment she improved rapidly, all her neurasthenic symptoms left her within a month and within two months she was feeling very much herself again, being up and about the house, and participating occasionally in little social functions. A too great freedom in this regard, however, resulted in a nasty gripe attack which undid much of the good which we had accomplished, left her weak and debilitated, increased her irritability, and destroyed her appetite. It took me fully another month to get rid of these symptoms and put her back where she was before. This I must confess is not an altogether encouraging case. The patient is high-strung, fond of gaiety, socially ambitious and chafes under the necessary restraint of the cure. I have, however, discussed the whole situation frankly with her, and she has accepted it with a fair degree of equanimity, and has promised to aid us in the cure all she can. The combination, however, of severe neurasthenia with tubercular infiltration of the lung, is not altogether a happy one for either physician or patient.

Case V.—Was a young physician who has suffered with several attacks of pleurisy with effusion. All of these have been relieved without aspiration, but about two years ago he commenced to lose flesh and to cough a good deal. Sputum showed tubercle bacilli and exploration of the chest disclosed roughling over the upper borders of both lungs and thickening of the pleura of both lungs behind. About a year ago he consulted me with reference to his lungs, having in the interim been off for six months in the country in the fruit belt, living his entire time out in the fresh air and picking fruit partly for pastime and partly as a means of livelihood. By this method of treatment he gained considerable flesh and strength, and decreased to a large extent his cough. I have seen and advised him at intervals during the past year. He has been able to resume his practice in a small country town, to which he removed partly on his own account, and partly on account of a tubercular sister whose case will be cited shortly. It is not necessary to go into the case in detail; suffice it to say he has done enough practice to support himself, his sister and his sister's child, and has kept himself in fairly good condition. The lungs are still diseased, of course, but he is generally in fair health. During the inclemency of the past

winter he had several colds, which used him pretty roughly, but by cutting out night work, and rough driving, he has been able to keep himself in fairly good condition. The case is rather remarkable, inasmuch as the man has been able to preserve his own independence and support two others besides himself while suffering as he is.

Case VI.—Is the sister of the previous patient. The probability is that she acquired the disease from her brother. She is a widow of about 35 years, with one child aged six. This patient found it necessary to work to support herself, but when she came under my observation was so weak that work was out of the question. Both lungs were invaded at their apices, temperature was about 100 constantly, and patient was coughing a sputum containing tubercle bacilli in goodly numbers. She had been employed in a close factory, and found it necessary to take street cars early in the morning, when they were cold, insufficiently heated and wretchedly ventilated. The hygiene of her house was likewise not any too good, and all in all the general conditions were what might be termed bad. I advised very strongly her removal to the country. Her brother rose to the emergency, opened an office in a country town, adjoining Detroit, took his sister to keep house for him, supplementing my instructions for suitable hygiene by concrete example of right living, and has enabled her to so improve her physical condition that she is now perfectly able to attend to the household duties for herself, her brother and her daughter. She is not by any means cured, but is certainly vastly improved.

Case VII.—Was the sister of Case II. She came to see me not about any cough, but about a condition consisting of malaise, anorexia, pain in the lumbar region and general debility. I explored her lung and examined her sputum and found nothing wrong, but with the brother's case before my eyes, with the possibilities of contagion so evident, and with the general condition of debility so manifest, I concluded this to be a case falling into the pre tubercular list. I could not, of course, diagnose anything tubercular in the case, but I was afraid of it, and felt that I owed it to her to put her in condition to fight off the germ if it obtained entrance to her system. I therefore proceeded by rest, by diet, by tonics and by systematic education in breathing, etc., to build her up. She responded beautifully and in a short time was in my estimation out of danger of any immediate infection. Possibly this patient would never have developed tuberculosis,

but I was not going to take any chances, and by putting her where she is, in a condition of vigorous womanly health, I feel that I have done for her the best that any man could do under the conditions existing.

Since writing the foregoing three weeks ago, five cases of tuberculosis associated with syphilis have come under my observation. I shall not discuss these at any length, but shall rest content with reminding you of the close association existing between these two diseases—a fact already noted by other observers.

I have considered only in my cases those who have been continuously under my care for the past year, as they alone were susceptible of careful study and analysis. The floating cases whom one sees twice or thrice, or only as a consultant, are not to be considered as possessing any value as cases for study, or as cases from which any conclusions whatsoever might be drawn. I have therefore not referred to this class at all.

As to the very pertinent question of medication in the cases under observation, I may answer it by saying that medicine was given an entirely subordinate part. That medicine has its place goes without saying, but that it should occupy the position of paramount importance which it did occupy some years ago, is, in the light of modern investigation and experience absurd.

In my cases creosote was given as a rule in one or two or three-drop doses, in milk and after meals, as a tonic and intestinal antiseptic. It was never given with the idea that it had any great healing power over the diseased lung tissue, although through its excretion by way of the respiratory tract, some antiseptic power even there may be evolved. Small doses of quinine when necessary, for their stimulating power upon leucocytosis, and for their powerfully tonic action on appetite and digestion, was frequently a recourse whenever conditions seemed to warrant.

Constant care of the digestion, and excretion through the intestinal tract, was inculcated upon all of the patients. With forced feeding of any case, free bowel action is a *sine qua non*, otherwise the effects of stagnation in the whole digestive tract become in a very short time the predominating symptom in the clinical picture.

Serum or vaccine treatment was considered only to be dismissed, inasmuch as it has no practical basis upon which to found a therapy. The opsonins may, and doubtless do, contain potentialities, but they have in no wise been reduced to a practical concrete form for the treatment of tuberculosis.

Summary—1. All cases under observation have received little treatment except rest, fresh air and forced feeding.

2. Internal medication has been used wherever necessary, usually to meet symptoms and to cure any aberration from the normal plane of health, at the earliest possible moment.

3. All cases have been relieved of the evening rise of temperature.

4. All have gained in flesh, the maximum gain being twenty-four pounds, and the minimum five.

5. All patients have been able to resume their ordinary avocations, and have been able to support themselves, and in some cases aid in supporting others.

6. The lung lesions have shown no striking improvement on physical exploration but the general sense of well-being in all cases has been marked.

7. All these patients understand the condition of their lungs perfectly, all are hopeful of a cure, and all are filled with the belief that they will be cured, a belief, which I, by the way, have carefully fostered.

8. All of these patients, understanding the conditions of the lungs and being

educated for the care of their sputum and excretions generally, are centers for a dissemination of knowledge of this white plague.

9. Only by a widespread dissemination of this knowledge can we ever hope to stamp out the scourge. And only by

careful instruction of our patients can we hope to eliminate them as potent factors for evil through the medium of their sputum.

10. None of these cases has been cured in the year, but all have been improved.

DISCUSSION.

W. H. Haughey, Battle Creek.—Mrs. S—, born in Ireland, came with her older sister to America when sixteen years of age, as a steerage passenger, or emigrant, worked as a domestic, sent money home for other members of the family to come until the entire family of father, mother and nine children were here. She was married at twenty-three years of age to a healthy Irish laborer. Her obstetrical record is as follows: May 25, 1890—twins, males at eight months, difficult labor 19 hours, forceps applied to both heads under anesthesia, both living. Oct. 15, 1891—male, normal, 18 hours, head, living, perineum ruptured, immediately repaired, but not good union. Nov. 19, 1892—male, normal, 4 hours, living, perineum and cervix ruptured, perineum repaired, but not good union. Jan. 3, 1894—female, foot, 1½ hours, postpartum hemorrhage, child dead. Nov. 29, 1895—male, normal, head, 12 hours, living. Nov. 14, 1897—male, normal, head, 8 hours, living.

After this last delivery she made a slow recovery, developed catarrhal pneumonia, which continued with septic conditions for several months, but eventually cleared up. During the summer of 1898 she told me that she believed herself again pregnant. Examination revealed nothing, but she was unconvinced, and still believed herself pregnant. I examined her at different intervals, always with negative results. At five months she declared she felt life, and continued to feel it through to term. During the complete nine months menstruation was incomplete and scanty, with intervals of two or three months of complete cessation. So positive was she of her condition being one of pregnancy that at the expiration of the term by her count, she made full preparations, went to bed, and sent for me to come and deliver her. It was only after two or three days had elapsed that she could be convinced that she was not pregnant, but as soon as she became so convinced all symptoms disappeared, menstruation became regular, although scanty and pale.

She took on a little flesh, developed a cough, with expectoration and in 1900 we found the tubercle bacillus in the sputum. For a period of three months the germ was present, then we failed to find it. In a short time she again announced herself pregnant. She gave every symptom except enlargement:—stomach troubles, cessation of menstruation which was this time almost complete, quickening, neuralgia, and other nervous symptoms. Again repeated examinations failed to convince her of her mistake, and it was only after the expiration of the term, and she had again made elaborate preparations for confinement, called me to attend her, and no pains supervened, that she became gradually convinced.

Her cough and expectoration soon returned, and in 1902 we again found the tubercle germ in the sputum, which remained for months, and again disappeared. By this time both herself and friends accepted the diagnosis of tuberculosis, and she passed from my care to that of advertising charlatans, and I saw her only at intervals until the summer of 1906, when she returned to me in bad condition. Cough and expectoration had greatly increased, pulse rapid, respiration accelerated, hectic, temperature 97° to 99°, appetite capricious. The tubercle bacillus was again present, and continued until about Christmas time, since when we have been unable to find it.

The financial condition of this family precluded any elaborate or expensive line of treatment. I decided, however, that fresh air is free if we will only let it into our houses. Theirs is a small six-room cottage of the ordinary upright and leanto variety, with the end of the upright facing the street, and completely exposed on three sides. I therefore placed the patient in this front room and opened all outside doors and windows, closing those opening into other parts of the house. In this room, opened as above stated, she has spent most of her nights, and except when she has been able to be out, days as well, since her last confinement in 1897, until last September, at

which time she again developed the tubercle germ in greater quantities than ever before. Also there was more depression and greater emaciation, and added to her discomforts, was increased discharge from her old laceration, and large and troublesome hemorrhoids. Her condition was such as to greatly discourage any operative efforts. She was, however, removed to Nichols Hospital. This building has on the second floor a porch enclosed on three sides and open to the street on the fourth, which faces the east. I caused a bed to be put out there and assigned to her use. She has remained on the porch, either in bed or in a chair when able, since that time, with no other means of warmth than hot water bags and bottles in the bed when necessary. She is taken inside about three or four times weekly for her baths, and even during the cold weather she requires all windows open when taking her bath. She has not taken cold even once, temperature has ranged from 95° to 99.8°, but most of the time has been 97° to 98°; pulse variable from 72 to 106 the extremes, but much of the time between 80 and 95. The extremes of respiration have been 20 to 30, averaging 24 to 26. Except during the extremely cold weather she has not been troubled unduly with cough, but even zero weather, or weather 5° or 6° above zero caused increased coughing, and those days when the temperature was below zero her cough was more pronounced and constant, with a thin, watery, slightly mucoid expectoration, in which we have not found the tubercle germ, although repeated search has been made.

The extreme cold interfered somewhat with alimentation, as no attendant could remain on that porch long enough to feed her, therefore she had to feed herself. The coughing paroxysms so delayed the meal that the food would get very cold, and be sometimes nearly frozen before she finished. Her appetite has been in the main good, with occasional days when it was poor. The hemorrhoids have long since disappeared, vaginal discharge almost disappeared, and menstruation, which had been absent for more than a year, returned in January.

March 25, Dr. A. W. Nelson, bacteriologist at Battle Creek Sanitarium, kindly determined her opsonic index to be .69. This seemed good and I determined to administer Koch's New Tuberculin. Beginning with 2-10 cubic millimeter (1-200 mgm. solids) in a .5% carbolic acid solution, I have gradually increased it until now I am giving 12½ cubic millimeters (1-40 mgm. solids) daily. At no time has any reaction occurred, nor has any untoward symptom presented itself. She has increased in strength, appetite and spirits. The hospital is not provided with scales for weighing, therefore increase in weight has not been noted, but an appreciable improvement is noticed by all. She sits up, walks a little, and has gained much strength.

On May 8, Dr. Nelson again made her opsonic determination and we find that in the six weeks, under the tuberculin treatment, her index has increased to 1.4, this being a gain of 103% over her first test.

Treatment of Hemorrhage in Typhoid.—

"Small hemorrhages and those early in the disease rarely require any special treatment. In the more severe cases the first essential is absolute quiet, generally best secured by a hypodermic dose of morphia, one-sixth of a grain usually being enough. The diet should be reduced to albumin water or all food may be discontinued, and it is better to stop stimulants, if they are being given. A light ice bag should be applied to the abdomen. The giving of drugs is of doubtful value. Ergot is probably more harmful than helpful. Adrenalin has been given by mouth and rectum. Styptics by mouth are of little value. The most difficult question is as to the advisability of giving opium. Its use is sanctioned by long custom, but to what extent bleeding is lessened by its administration is a question not easy to answer. By giving opium we favor dis-

tention which in itself is a serious condition. Perforation frequently occurs with hemorrhage, and if opium has been given there is practically no chance of recognizing it before the onset of general peritonitis. As a rule the patients with hemorrhage seem to do better without opium."

"Calcium salts may be given as a prophylactic measure, the coagulation time of the blood being taken in every patient, and if it has prolonged, calcium lactate in doses of 10 grains is given three times a day. It is always well to give it, if hemorrhage has taken place. Gelatin injections are of no more value than the calcium salts and are very disturbing to the patient."

Saline infusions should not be given, unless the patient is in collapse. There need be no alarm about low blood pressure.

It is advantageous to have constipation after hemorrhage.—McCRAE, Osler's *Modern Medicine*.

DIET IN TUBERCULOSIS*

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The importance of proper diet in tuberculosis has been dwelt upon since the time of Hippocrates. Aretæus mentions the use of milk in the treatment of phthisical patients. Quotations pregnant with facts relating to the value of proper food might be added from almost every medical writer of prominence. Osler sums up the matter as follows: "As a healing of a tubercular process is largely dependent upon the state of nutrition, the question of diet becomes of the very first importance."

In a disease with such protean manifestations there are many points that must be considered. As the malady usually attacks the lungs, this paper will deal principally with pulmonary tuberculosis, for if the dietetic management of a case of pulmonary phthisis is understood thoroughly, there will be no difficulty in modifying it to meet the requirements of other forms of the disease.

The nutrition of the patient is a reliable guide as to the progress of the disease. If he is taking sufficient nutritious food, is digesting it, and is gaining in weight, the prognosis is good. If the reverse is the case, the prognosis is bad. A persistent inability to digest food is always an unfavorable symptom. Care should be taken to avoid disturbing the stomach by the use of nauseating drugs. Patients are too frequently dosed excessively with creosote, cod-liver oil, cough mixtures and hypophosphates, while milk and eggs are not given often enough or only in insufficient quantities.

Irritability of the stomach should receive early and the most careful consideration. It is usually due to fever, anemia, the swallowing of sputum or improper food or drugs. If due to fever, care in selecting the diet, as will be described hereafter, should be exercised. When there is marked anemia, fresh air, sunshine, good food, massage, and iron in an easily assimilable form, are helpful. In all cases the patient should be instructed not to swallow the sputum, as irritability of the stomach with vomiting is almost certain to follow sooner or later. He should be questioned closely regarding the food and drugs he is taking. One should be certain that he is not taking a patent medicine in addition to what has been prescribed for him. "Quick cures" are always attractive, and are often indulged in secretly, to the great detriment of the patient. A suspension of all drugs from time to time will do much to relieve the overdosed stomach. In some individuals irritability and nausea may be brought on by the too continuous administration of any one drug.

The appetite, since it is generally poor and capricious, is not a good guide as to the amount of food to be taken. In most cases more food can be digested than the appetite demands. While this is so, the desires of the patient should, nevertheless, be consulted so far as possible, and more good can be accomplished by humoring the patient's reasonable demands than by combatting them. The character of each patient should be studied, and in this condition particularly tact

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plays an important part. A nurse or a physician with natural tact and sympathy will often manage to get sufficient food into an intractable or capricious patient where skill without tact would fail completely.

Other factors to be considered are the nationality and usual mode of life of the patient. Many diet-lists intended for tubercular patients are taken from works of German writers. A German or German-American might thrive upon these, whereas an Englishman, a Frenchman, or American, would find it difficult to take some of the articles advised.

In the choice and preparation of food the utmost care should be exercised. Detweiler's saying, "My kitchen is my pharmacy," holds in these cases. The food should be prepared simply, and yet should be varied and made as tempting as possible. The stomach and intestines should be watched, and constipation promptly relieved. Patients who are taking large quantities of food and resting much of the time are apt to be costive. Sugars and starches are rarely well borne. This may be due to the presence of catarrhal conditions of the bowels, but may also be true even when catarrh is not present. Young, growing girls often crave sweets, and when this craving is indulged in to excess, the stomach and digestion becomes disordered. While sufficient food should be given, an excess is injurious, and each patient should be watched carefully. Not more should be given at one time than the patient can digest with ease.

Rest is important, and the patient should be instructed to rest before and after meals, if he is not receiving the combined rest and diet cure, he should lie down at least half an hour before and after meals.

Coughing is sometimes excited by the taking of food. If this is due to laryngeal involvement, it should be managed according to directions given in treat-

ment of diseases of the larynx. When due to the pressure of an over-filled stomach, the meals may be smaller and closer together. Gavage or feeding by means of a soft rubber tube may be employed in those cases that vomit everything they eat because swallowing brings on spasmodic cough.

The care of the mouth is of great importance. It is well to rinse the mouth before and after eating with some one of the popular mouth washes, as listerine, Dobell's solution, etc. The teeth also should be kept scrupulously clean.

Milk is one of the most important articles of diet for the tubercular patient. Unless some special reason exists, milk should always form a part of the diet. It may be taken with the meals or be given between the intervals of feeding. It is of the utmost importance that the milk be sipped slowly, and not swallowed quickly in large quantities. The milk may be taken plain, or may be modified in various ways. Lime water may be added, with or without the addition of cream. Carbonated water may be mixed with it, or the milk may be peptonized. Buttermilk or kumiss may be taken if desired.

Eggs, when they can be taken in sufficient quantities, are also of the greatest value. In certain cases, however, they may not be well borne. If the entire egg can not be taken, the whites may be given alone. Egg-albumin often renders most efficient service in helping to nourish these patients. The white of from six to twenty-four eggs beaten up lightly and strained through a cloth may be taken daily. A very small pinch of salt and a little lemon-juice or other flavoring substance may be added. Given in this way, a large number of eggs can easily be taken, and are almost invariably well borne. If the patient can digest the eggs entire, they may be very lightly boiled, or as a change they may be made into a light omelet or poached. Hard

boiled and fried should not be eaten.

Meat of all kinds, if properly prepared, may be taken; but "high game," highly seasoned dishes, and twice cooked meats should be avoided. Beef and mutton are the most suitable varieties. Raw meats, especially raw beef, have been highly extolled by French writers. The experimental work of Richet and Hericourt on dogs, tending to show the value of raw meat, has been much criticised. Cornil and Chantemesse recently contributed to the subject by their experiments on dogs. Placed under similar conditions, some of the animals were fed on raw meat and others on cooked, and both series were inoculated with virulent tubercle bacilli. The dogs fed on cooked meat all died in a short time of tuberculosis, while those fed on raw meat lived. Some of the animals, at the time when in apparent good health, were killed and showed tuberculous deposits. Others lived in apparent good health, and on being killed a year later showed tuberculous deposits in a condition of healing.

Grancher suggests that for tuberculous patients the raw meat be given in the form of a finely divided pulp. This is prepared by scraping the meat with a knife, which will result in a mass of shredded meat fiber. This is placed in a mortar and pounded and rubbed with a pestle until quite smooth. It is then pressed gently through a sieve to remove any large particles. This raw meat pulp is very easily digested and highly nutritious. It may be given in various ways, as spread on sandwiches or given in milk or in warm bullion. It may be mixed with vegetables or in the case of children with small quantities of preserves. It may be rolled in balls and so easily swallowed, or it may be served with egg, with anchovies, or with pickled herring.

Meat juice is also of great value. This may be prepared according to any of the usual recipes, or the juice may be ex-

pressed from beef by means of a meat press. Good round steak should be very slightly broiled, cut into cubes, and the juice pressed out. With a good press about eight ounces of juice can be extracted from a pound of meat. This should be seasoned and heated by placing the vessel containing it in warm water. Care should be taken not to heat it too thoroughly, or the albumen will coagulate and the juice be spoiled. Freshly prepared beef juice is always preferable, but when this cannot be obtained, liquid beef peptonoids, predigested beef, or Masquera Beef Meal may be employed. For patients who cannot or will not take raw beef, very rare steak, roast beef, or beef soup should be prescribed.

Fresh fish, boiled, broiled, or baked, may be allowed. Both oysters and clams from which the hard portion has been removed, may be eaten, preferably raw, but they may also be given stewed, roasted, or broiled.

Where cereals can be digested they are of value. In the early stages of the disease they serve not only as nutriment, but also aid in regulating the bowels, and are usually easily digested. If there is constipation, they are of special value. Oatmeal, wheaten grits, corn meal mush, and rice and milk are the most suitable forms.

Any of the easily digestible vegetables may be allowed. They should be steamed or cooked with as little water as possible, to avoid dissolving out the salts, which together with much of the nutriment, are thrown away with the water.

Wheat or rye bread, or mixture of both, may be used. Zwieback is of great value. All hot bread, pastry, and cakes should be avoided.

All fresh and preferably ripe fruit may be allowed in moderation. It should be taken the first thing in the morning or as a dessert. Baked apples and oranges are well borne and useful, and grapes,

peaches, pears and other fruit in season may be allowed.

In tuberculosis, when fats and oils can be taken and absorbed, the prognosis is always much better than when these can not be tolerated. While they are of the greatest value in treatment, care should be taken not to disturb the patient's digestion by forcing more fatty foods into the dietary than the stomach will tolerate. Most patients, however, soon acquire a dislike for fats of all kinds. They are best given in the form of cream and butter; the yolks of eggs, crisp fat bacon, and olive oil are useful: Codliver oil is really as much a food as a medicine. Either the plain oil or an emulsion may be used, and the doses should be small to begin with and gradually be increased. A common mistake is to administer the oil in excessive quantities. Only perfectly sweet fresh oil is to be used, as rancid or stale oil may disturb the digestion. Its use should be discontinued from time to time. Children bear oil better than do adults. If there is a tendency to diarrhea, fats and oils must be used with caution.

There is much diversity of opinion concerning the influence of alcohol in tuberculosis; three views have been expressed, and each has its supporters:

First: That alcoholism is antagonistic to tuberculosis.

Second: That alcoholism exerts no special influence on the individual as regards tuberculosis.

Third: That alcoholism definitely predisposes to tuberculosis.

The last view has the largest number of supporters, as alcoholism probably renders the body more susceptible to all infections. Osler has stated his opinion as follows: "It was formerly thought that alcohol was in some way antagonistic to tuberculous disease, but observations of late years indicate clearly that

the reverse is the case, and that chronic drinkers are much more liable to both acute and pulmonary tuberculosis. It is probably altogether a question of altered tissue soil, the alcohol lowering the vitality and enabling the bacilli more readily to develop and grow."

Concerning the use of alcohol in the treatment of tuberculosis, it may be said that, except in the last stages of the disease, it is best avoided. Nationality and habits, however, must not be disregarded. To those habituated to the use of a glass of wine or beer with the dinner, this may be allowed. The quantity taken must be limited to the smallest reasonable allowance. This will vary with each individual.

Patients who are gaining weight or who are in good condition are better off without alcohol. Those who are going down hill may often take light wine, beer, or well-diluted spirits with advantage. If the last, well matured pure whiskey is the best.

Patients with high fever who are in an exhausted condition may be given alcohol freely, following the same rules as were laid down in the general considerations of fever. In these cases alcohol is given as a food, and is, as a rule, very well borne. In these advanced cases pure whiskey well diluted is perhaps the best form of alcoholic stimulant, but the patient's taste may be consulted in this respect.

The usual beverages may be given in moderation. In chronic tuberculosis co-cas may be taken night and morning with good effect. Tea and coffee may be allowed in small quantities unless they produce unfavorable symptoms. Milk and milk punch, buttermilk, lemonade, orangeade may be used, and malt extracts are often of benefit.

Food may be given from three to six times a day. On rising, milk may be taken, or if desired, a cup of bouillon instead. This may be followed by break-

fast, and about the middle of morning a glass of milk, egg albumin, beef juice, or broth may be given with a cracker or a piece of toast.

A midday dinner should be the rule, and during the middle of the afternoon a light lunch of scraped beef, milk, or some similar food may be given.

Supper may be taken at a convenient evening hour, and before going to bed a glass of milk may be drunk. If desired, or if deemed necessary, a small amount of liquid nourishment may be taken during the night if the patient awakens. As a rule, however, it is well to give the stomach a full night's rest. In severe cases, where only small quantities of liquid or semi-solid food are taken, the intervals should be shortened to every two or three hours.

In advanced cases patients may generally be permitted to select their diet. These cases can often eat hearty meals with relish and apparently digest them without difficulty. As a rule, their diet must be light, liquid or semi-solid. The same principles may be applied here as in feeding fever cases, with the exception that the patient's desires should, as far as possible, be gratified.

Various diet cures have been advo-

cated for the relief of phthisis. The benefit which follows their use is due largely to the fresh air, and abundance of food they prescribe. I will not take the time to outline the diet used in these cures.

Débove discovered accidentally that food introduced by means of a stomach tube was retained, where, if taken by the mouth, it would be rejected. He therefore turned his attention to the treatment of tubercular patients by means of this method, and met with a measurable success. This form of treatment is especially applicable in those cases where there is an irritable stomach and no appetite.

Food is introduced into the stomach by the tube at regular intervals. Milk, peptonized or diluted, ground meat mixtures, eggs and milk, albumen water, beef juice, predigested beef preparations, and similar liquid foods may be utilized for this purpose. Gastric catarrh and fever are contraindications to forced feeding.

In conclusion, it is well to reiterate that proper diet is of the utmost importance in the treatment of all forms of tuberculosis, and that it is our best weapon to successfully antagonize the rapid advance of the disease.

The Invention of the Stethoscope.—Laennec (1781-1826), the celebrated French pathologist, was the inventor of the stethoscope. His discovery, which was accidental, is thus described by him: "In 1816 I was consulted by a young woman laboring under the general symptoms of a diseased heart, and in whose case percussion and the application of the hand were of little avail, on account of the great degree of fatness. I happened to recollect a simple and well-known fact in acoustics, and fancied it might be turned to some use on the present occasion. The fact I allude to is the great distinctness with which we hear the scratch of a pin at one end of a piece of wood, on applying our ear to the other. Immediately, on this suggestion, I rolled a quire

of paper into a kind of cylinder, and applied one end of it to the region of the heart and the other to my ear, and was not a little surprised and pleased to find that I could thereby perceive the action of the heart in a manner much more clear and distinct than I had ever been able to do by the immediate application of the ear."—Laennec—*Diseases of Chest*.

Remember that, if you cannot detect a supposed vesico-vaginal fistula, a little boiled milk and water injected into the bladder will, by the aid of a speculum, be seen to escape through the opening.

Never use fly blisters on a patient who may be suffering from any kidney affection.

TUBERCULOSIS FROM A SURGICAL STANDPOINT*

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Greenville.

In this particular part of the subject under discussion, I have not aimed to write an academic paper, or to discuss any new theories, believing that in such a society as ours, more benefit will accrue to the members from a discussion of the cases we commonly meet with, than from a rehash of the many fine-spun theories we constantly see in some medical journals; and in consequence of this I have not attempted to write anything about cases with which I have had no personal experience. Thus there will be many lines of surgical treatment of tuberculosis which I shall not touch upon.

In considering the subject of tuberculosis from a surgical standpoint, it should be borne in mind that no portion of the human body is exempt from this disease, and while surgery plays no unimportant part, it is necessarily subordinated to, and an adjunct of, the lines of treatment so successfully carried out in many of the recently built sanatoria and retreats for the treatment of the white plague, as well as in private practice. There are, however, some few conditions which call for surgical treatment, and these I shall briefly refer to in this paper.

It is a difficult matter to take a case of tuberculosis in any part of the human anatomy and say "This case is distinctly in the realm of surgery," for the surgeon's services are not in demand until the disease process has reached the stage of dissemination, and usually not until

there has ensued distinct destruction of tissue.

From a surgical standpoint the most frequent seat of tuberculosis is the joint structures, and by far the greater majority of such cases will be found among children under fifteen years of age. Tubercular arthritis involves all the structures of the articulation, bone, cartilage, ligaments, synovial membranes, etc. The opinion which has prevailed, namely, that almost all lesions of the joints were caused by traumatism (injuries of some sort) has been proved by the accumulated experience of many accurate and conscientious surgeons to be unscientific and without foundation in fact. That form of inflammation which leads to arthritis begins in an interference with the normal nutrition of the parts.

The primary lesion either is the rupture of capillary vessels, or tubercular deposits in or near the articular surfaces. It is absolutely known that in growing bones, rupture of a capillary vessel with extravasation of blood is very common, even in healthy children. It must be still more frequent in those children suffering from any dyscrasia, which not only renders the capillary walls less strong, but lessens the reparative power of the tissues involved.

Tubercular arthritis may originate in the deposit of the tubercle bacillus directly in the synovial membrane, or indirectly, by invasion from foci of this disease, in or near the epiphysis contiguous to the joint. Though not uncommon in adult life, it is very much

*Read before the Montcalm County Medical Society, July, 1907.

more frequent in children. There is also a very marked difference between arthritis caused by injury, and arthritis caused by infection of tuberculosis.

In traumatic arthritis the pain is always acute, and is the symptom for which the physician is usually called. In arthritis of tubercular origin, however, pain is rarely acute, often absent, and when present is usually intermittent or mild in character.

Again, in tubercular arthritis, the function of the joint is not materially interfered with, until the disease has so far progressed that destruction of tissue has commenced.

Because of the frequency of its occurrence and the seriousness of its results, and because the treatment is more distinctly surgical, I shall attempt to discuss briefly arthritis of the hip joint, or morbus coxarius. As you well know, it is a formidable disease; one which will often baffle the best medical and surgical care, through weeks, months and years of suffering, ending only too often in destruction of the joint and frequently in death. Again I wish to state that it is essentially a disease of childhood, occurring chiefly during the period of rapid growth. I assume that everyone present is familiar with the symptoms of hip joint disease, so that the pathology and etiology will not be touched upon in this paper. I desire to emphasize, however, the importance of careful differential diagnosis in all hip joint troubles. This was very forcibly impressed on the writer some months ago in the case of a young man, now deceased, who was treated for eighteen long months for rheumatism, then for five or six months by an osteopath, also for rheumatism. In one of their lucid intervals the family called in the president of this society, who correctly diagnosed hip joint disease, made the necessary operation, evacuated a quart of pus, established drainage, and gave the young man's family

their first correct information regarding his disease. The case subsequently came under my professional care. Examination showed tubercle bacilli present. There was much destruction of bone, joint utterly destroyed, shaft of femur honeycombed, and osteitis had extended to large portion of os-innominatum. I sent the patient to Detroit where he was operated on by Dr. T. A. McGraw. He remained in the hospital about four months, and was fitted with an ambulatory splint before his return. After operation the suppuration steadily grew less, until all sinuses finally closed. After a few weeks suppuration commenced again, fever, diarrhea, cough supervened; general tuberculosis closed the story.

Now here was one of the cases where an early correct diagnosis would almost certainly have resulted in a cure, with probably an ankylosed hip joint.

When a patient consults you regarding pains in the hip or knee joint, don't listen as if you were much interested, and then tell him or her that it is a case of rheumatism, neuralgia or bursitis, but set your mind on the possibility of it being hip joint disease, and make the necessary examination to determine whether or not such is the case.

Now if the patient is a child, from three to fifteen years of age, gives a history of slight or intermittent pains in knee or hip joint, which is most marked in the night-time or early forenoon, and disappears after child moves around a while, then get to thinking about tubercular arthritis.

The treatment of tubercular arthritis is mechanical and constitutional, up to a certain point only. After that point is reached, surgical interference is the only available method. After fixation of the muscles and joint with splints, plaster of paris jackets, extension and counter extension, and the various ingenious appliances invented for relief in such cases, there remains a certain percentage of

patients who do not improve, who on the contrary grow steadily worse. Operation is necessary to relieve pain on account of suppuration and the retention of pus, to prevent sepsis from insufficient drainage, to arrest osteitis in the head and neck of the femur, and in the acetabulum. When pain is so severe that fixation of the joint with extension will not relieve it, it is safe to conclude that suppuration has occurred to such an extent that incision is necessary. It is by far the better plan to open freely into the joint, remove all diseased bone, even to an excision of the hip joint if necessary, than to allow the disease products to make their escape through the small tortuous sinus, which nature provides in her efforts to get rid of useless material. The operation removes at once all diseased tissue, and leaves a free and open wound for drainage, which should be packed with gauze and treated by the open method.

Tubercular arthritis in any other joint, when it reaches the surgical stage, should be treated by free incision and drainage. The best result that can be hoped for is ankylosis of the diseased joint.

I have dwelt upon hip joint disease simply because in my experience, extending over nearly twenty-five years, I have repeatedly found cases of this disease, tubercular in character, which resulted fatally and which I am convinced might have been saved had a correct diagnosis been made early. I do not consider that any physician would be excusable in making a wrong diagnosis of these cases, throughout many months, as was done in the case noted above.

An entirely different manifestation of tuberculosis, with which we are all familiar, and for which the treatment is distinctly surgical, is tubercular lymphoma of the cervical glands. If these cases appear for treatment before suppuration occurs, the necessary operation is

very simple and easily performed. Using antiseptic precautions, simply make the necessary incision, remove the diseased glands and close the wound. Healing will follow without incident, and the resulting scar on the neck will be scarcely noticeable. If, however, the patient postpones operation until suppuration has occurred in the gland or glands, you have a different proposition on your hands, for while the removal of the gland is easily done, the healing process is very slow, and the resulting scar is large, prominent, red and unsightly, and if your patient happens to be a female you will have that horrible scar thrown in your face so long as you stay in the neighborhood. She will also advise all her friends never to let doctor so and so do any surgical work on account of his lack of skill, always exhibiting her disfiguring scar, as proof of your incapacity as a surgeon.

This has been my experience in three different cases and I imagine most of the members present could recall similar instances and relate just such a tale. The moral is, that we should insist on the removal of tuberculous glands of the neck before suppuration occurs, and thus avoid the unsightly scars.

I have seen one case of tuberculosis of the mammary gland. The nodules were disseminated generally throughout the gland, and were hard to the touch. This patient had tuberculosis of the lungs, so nothing was done in a surgical way. I have read of cases of primary tuberculosis in the breast, where the gland was removed and a cure effected.

Another organ which seems a favorite place for the development of tuberculosis, and for which recourse is had to surgery, is the testis. The diagnosis is not difficult. In simple orchitis or epididymitis the pain is extreme and pressure unbearable. In tuberculosis of the testis, while the swelling may be quite marked, the pain is very slight.

and may be absent entirely. The patient will come to consult you because he feels numerous hard lumps or nodules, small but distinct in his testicles. On examination you will also find the cord hard and its surface uneven and nodular.

The prognosis of tubercular disease of these organs is so grave that when an early diagnosis can be certainly made, the diseased tissue should be removed. If only one side is involved and the other organ is fully developed, there should be no hesitation in advising castration. When both organs are involved there is very little use in doing anything along surgical lines, as the tuberculosis is probably a secondary infection. At all events there seems a deep rooted objection on the part of most men to the operation of castration, even when such operation is absolutely necessary and clearly indicated. Possibly in the discussion some of the members can explain the reason for the unpopularity of this particular operation.

Lupoid or tubercular ulcers, which formerly were treated by surgical means, are now more successfully treated by electricity, X-ray and high frequency coils.

Another manifestation of tuberculosis which sometimes requires the aid of the surgeon, is tuberculous ostitis of the vertebræ, commonly known as Pott's disease. This disease, like tubercular arthritis of the hip joint is essentially a disease of childhood, the great majority of cases occurring among children. The treatment is almost entirely mechanical and constitutional, but frequently (as in psoas abscess) the surgeon is called on to establish free drainage or to clean out the waste products of the disease.

Tubercular ostitis is frequently encountered. The bones of the fingers, hands, arms, legs, in fact any part of the bony structures may be the seat of this trouble. The surgical treatment in such cases differs in no way from that outlined. Establish drainage, remove diseased tissue. Early diagnosis spells success in the treatment of tuberculosis, and whether the treatment indicated be medical, orthopedic, constitutional or surgical, or all combined, one fact is absolutely proven, and that is, that the doctor who makes the earliest diagnosis in the disease, is the doctor who does the greatest good to the tuberculous patient.

That perennial question, the ownership of the prescription, is being agitated in some of the German newspapers, owing to the publication of a legal opinion in which it was declared that the prescription was the property of the physician, the patient having only temporary rights in it and the apothecary none at all. If, however, the patient at the time of receiving the prescription from the physician stipulates for the right to own it, then it becomes his property; but this property right does not carry with it the privilege of selling the prescription to another or of incorporating it in a book of formulas. We think that the practice, so universally observed in English-speaking countries, of the apothecary retaining the original prescription and furnishing a copy to the patient, if

asked for, is the best one. In the case of a controversy arising as to the correctness of the apothecary's work in putting up the prescription, his ability to produce the original and prove his case by it might be an important factor. A case to decide the ownership of the prescription has never been taken to the State courts of last resort in this country, and in the absence of decisions of this kind pharmacists would do well to insist on retaining the original prescription and furnish a copy only when demanded. Explicit orders of the physician should, however, be obeyed. If the apothecary is instructed to return the prescription to the patient, then all he has to do is to make an exact copy of it and file it for reference.—*American Druggist.*

CASE REPORTS. 1. OTO-ANTRITIS IN A CHILD 3 MONTHS OLD. 2. TYMPANO-MASTOIDITIS IN A WOMAN 7 MONTHS PREGNANT. 3. CEREBELLAR ABSCESS IN A CHILD 4 YEARS OLD.

EMIL AMBERG, M. D.,
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The following three cases are reported only very briefly with the intention mainly of placing them on record, and not with the purpose of giving an exhaustive detailed description of them.

1. Oto-antritis in a child 3 months old.—Boy baby, L. D., born October 13, 1906, was brought to my office January 16, 1907. The mother reports as follows: The boy became peevish when about six weeks old. When about two months old the auricle was protruding forward, and when $2\frac{1}{2}$ months old the whole left side of the head was swollen.

When I saw the patient, on January 17th, the whole left side of the head presented an immense cone-shaped swelling with the forward bent auricle resting on the top of it. His twin sister appeared to be much healthier and larger.

In Grace Hospital, on January 17th, I made a short incision behind the auricle under chloroform narcosis, and a considerable amount of pus was evacuated. The general condition of the child changed immediately for the better. A few days later I made a second short incision, higher than the first incision, in my office, without narcosis, and at different times I curetted the antrum slightly. A slight discharge from the lower wound, amounting to not more than a few drops in a few days, appeared and continued for some time. The infant was seen in my office every other day until February 11th, then at greater

intervals. On March 13th, 1907, the wound, according to the report of the mother, had entirely healed and the canal was entirely dry.

I desisted from a large opening and from an extensive operation, because I took into consideration that the child was looking rather miserable. It was brought up on mother's milk and condensed milk alternately (on account of the lack of sufficient supply of mother's milk for the twins). I thought it might not have been in position to lose a great amount of blood. Furthermore, I paid special attention to the nourishment of the child inasmuch as I allowed feeding until a comparatively short time before the operation and permitted feeding again soon after the operation, about three hours in each instance, in order that the infant should not lose too much of its vitality.

2. Tympano-mastoiditis in a woman seven months pregnant. The patient, Mrs. C. F. R., 28 years old, said in part: "The first trouble I had with my ear was in October, 1906, when I was taken with pains in my head in shape of severe headache, and a discharge from my ear. I had my ear washed out by a doctor three times, and there was not any more discharge from my ear at that time. But I had bad headache, all during the winter, and wanted to sleep all of the time, and I also was pregnant, and was ill with my head most of the winter, but I did not give up and go to my bed until I was taken ill on May 6.

Read at the Saginaw meeting of the Michigan State Medical Society, May 15 and 16, 1907, and approved for publication by the Publication Committee.

1906, with a severe pain in my head and a bad discharge from my ear. The pain seemed to become more severe each day. I was taken to Harper Hospital for an operation. The doctor operated the morning of May 24, 1906."

On May 24th I performed a mastoid operation, confining myself to opening the antrum and some cells, as I was afraid to keep the patient under an anesthetic long on account of her pregnancy. On account of severe symptoms and high temperature I removed, on May 28th, practically the whole mastoid process. The extent of the operation may be imagined from the fact that only the twitching of the facial nerve forbade us to go further towards the median line. In all directions the wound cavity extended correspondingly.

Patient made an uneventful recovery and gave birth to a healthy child weighing seven pounds and thirteen ounces, at full term, on July 28th. On April 25th the child was nine months old and weighed $22\frac{1}{2}$ pounds. The mother could nurse the child for only one month. During her disease, the patient suffered for a while considerably from her eyes, having for a time double vision. I could not detect any evidence of intracranial affection as cause for the same.

3. Cerebellar abscess in a child 4 years old.—Girl, N. McK., four years old, was brought to me on the 3rd of September, 1906, with the history that she had been very sick for some time, the ear discharging for some two years.

The accompanying chart (rectal temperatures) is illustrated by the following comment: On September 6th, I performed the radical operation. On September 8th I examined the cavity again, which appeared to me healthy.

On September 11th (see chart), I opened the lateral sinus with a knife. It bled freely and showed no signs of

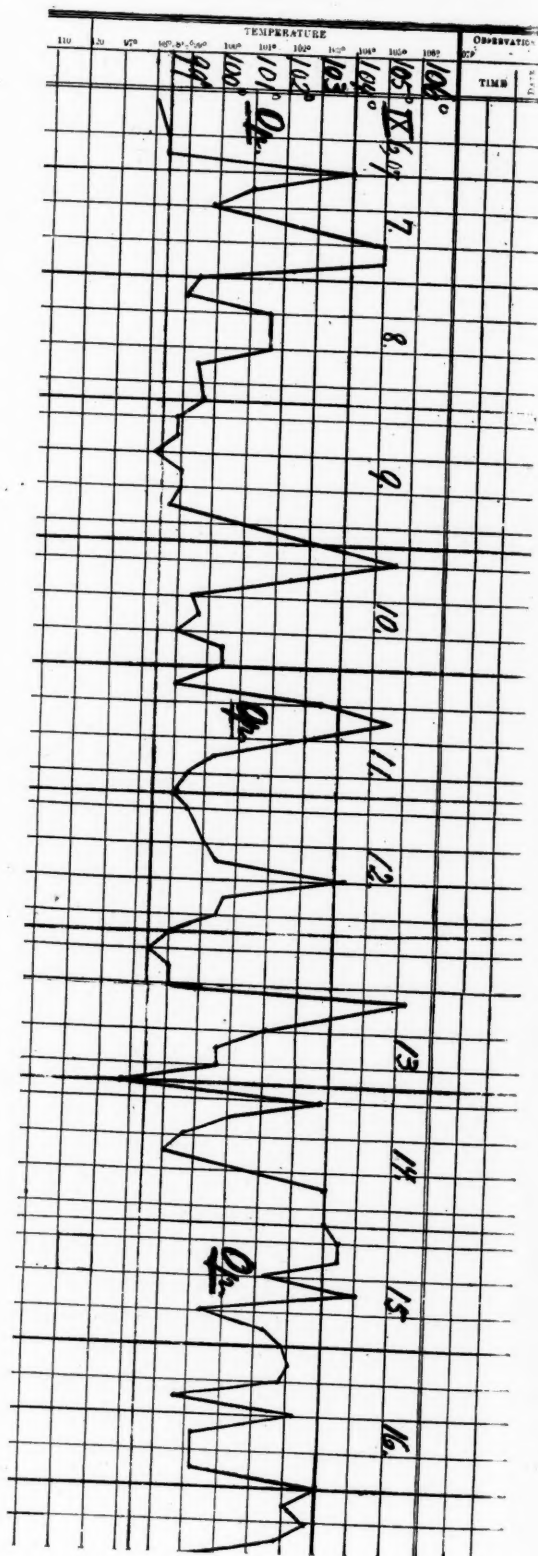
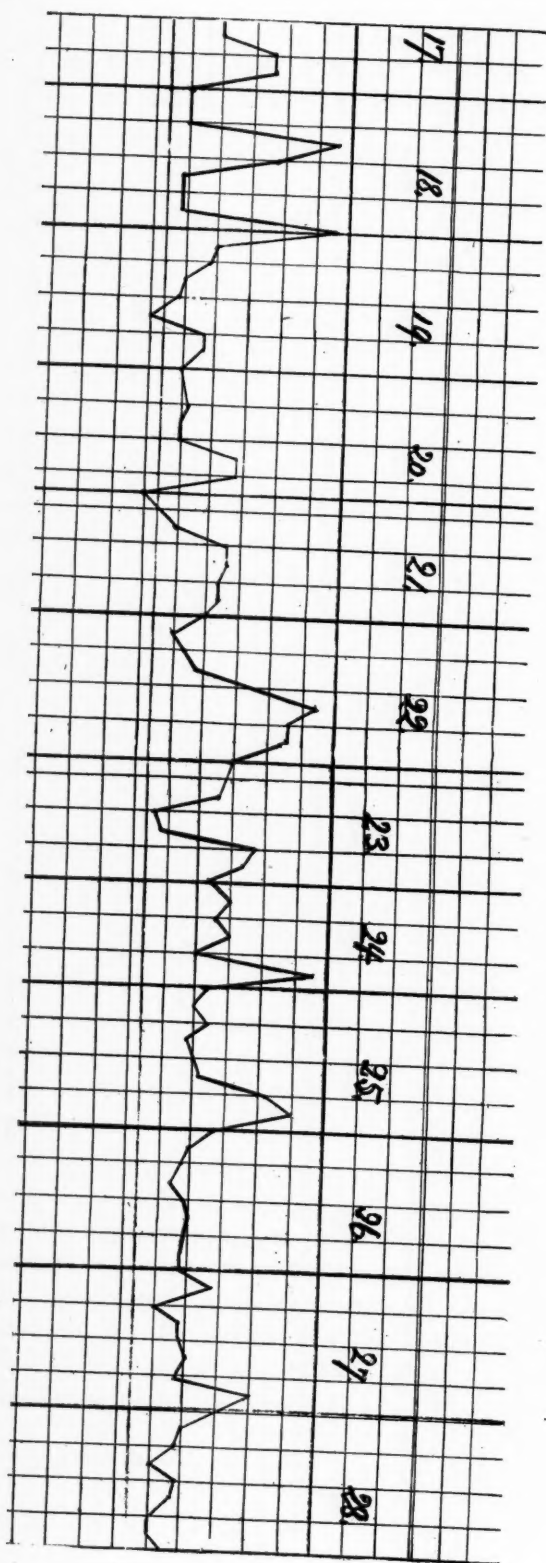
disease. Bearing in mind the possibility of thrombosis of the jugular bulb, I asked Dr. Ballin to be kind enough to tie for me the internal jugular vein.

There was always some offensive odor to the discharge.

On September 15th I opened the middle cranial fossa. The dura appeared healthy. Examining with the curet, the posterior wall of the extensive wound cavity I detected some thin, foul smelling discharge on the wall separating the posterior cranial fossa from the wound. As I had no other evidence of disease causing the very high temperature in the child (106.2° on the 13th of September), I concluded that the seat of the trouble must be towards the posterior cranial fossa and concluded to examine in that direction. While chiseling between the lateral sinus and semi-circular canals suddenly thick, yellowish green, pistache ice-cream-like pus was liberated. I entered with the curet to the depth of about a quarter of an inch into the cavity, and very gently removed material which may have been broken down brain tissue. I did not use any force whatever and stopped curetting as soon as I concluded that I had removed practically all of the diseased material possible without injury to the healthy tissue, which, I thought, was the case when the field was covered with blood.

To this very careful manipulation I attribute the success of the operation. The chart shows an improvement immediately after this operation. Quinine seems to have been very beneficial to the patient after evacuation of the abscess. The pulse varied mostly between 120 and 140, rarely going down to about 100 or 110 until September 29, when a tendency toward a more diminished pulse rate is noticeable.

Patient was discharged on the tenth of October from Harper Hospital. The



further course was uneventful. The child living out of town went home in due course of time, and the very slight discharge from the lower portion of the tympanic cavity does not molest the child in the least.

CONCERNING THE RECTAL VALVES*

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The rectal valves have long been a subject of more or less discussion among anatomists, as well as those who are interested in the study of proctology, but apparently they are not given a great amount of consideration by the profession generally. This is probably due to the fact that in their normal state these valves, by reason of their location, attract but little attention.

When they become abnormal or hypertrophied, however, they are a fruitful source of trouble and are often a prominent causative factor in constipation or obstipation, stricture of the rectum, or fecal impaction.

Gant reports an interesting case of fecal impaction where the mass rested immediately above the second rectal valve. He says: "In this case the valve projected into the caliber of the bowel much further than usual, was much thickened, highly inflamed and appeared to be the principal cause of obstruction."

The fact that the valves are so frequently the predisposing causes of these conditions makes the subject one of no little importance and it is my intention to review briefly the literature concerning them.

The first published report describing the rectal valves appeared in the Dublin

Hospital Reports of 1830, and was written by Mr. John Houston, and since then the rectal valves and the "valves of Houston" have been synonymous terms.

After Houston, much was written by different men, with variations of course, prominent among whom might be mentioned, Morgagni, Cloquet, Portal Otis, Nelaton, Velpeau, Quenu, Hartman and Kohlrausch.

The writings of some of these men even antedate those of Houston, but the latter was the first to furnish a clear description of the valves as to number, location, functions, etc.

Coming down to the present day we find Kelsey, T. C. Martin, Pennington, Tuttle, Gant and others giving the subject much thought and attention, but the work is all along the lines laid down by Houston.

Description of the Valves.

The mucous membrane above the crypts of Morgagni appears in irregular folds. The majority of these folds disappear, as a rule, when the bowel is distended, but at several points they become more prominent under distention and extend out into the lumen of the gut in the form of crescents. These are the rectal valves, or the valves of Houston. They are usually three in number and are termed the superior, middle and in-

*Read before the Wayne County Medical Society, October 28th, 1907.

ferior valves, according to their location. The number may vary however from one to five, but in the majority of cases three are found.

The most prominent of these three valves is the middle one and its situation is determined by the depth of the peritoneal cul-de-sac, the valve being always located just beneath it. Ordinarily it is found about three inches from the anus, and it appears projecting from the right anterior wall. This valve is the "*Plica transversalis recti*" of Kohlrausch. The superior valve appears at the recto-sigmoidal junction, on the left rectal wall and somewhat anteriorly. The inferior valve is also on the left side, posteriorly and is usually found slightly more than one inch above the anal margin.

The valves are crescent shaped and are attached to the wall of the bowel for from one-third to one-half of its circumference. Under normal conditions the free borders of the valves are thin and freely movable, so that during the descent of feces they are easily pushed aside. The bases of the valves, where they are attached to the rectal wall, are somewhat more thickened and the attachment is slightly higher on one side than on the other, giving the valves an inclined plane appearance and aiding the feces in their downward movement.

In selected cases, with the patient in the knee chest position, with the rectum well inflated, and with the aid of a proctoscope and a good light, one can see all the valves at the same time.

Structure of the Valves.

The structure of the rectal valves varies to some extent but the majority of investigators and writers on the subject agree that the composition in the average case is somewhat as follows: Mucous membrane, submucosa, circular and longitudinal muscular layers and a sub-

serous layer in which is included areolar tissue, fat, the lymphatics, nerves and blood vessels. The mucous membrane is continuous with that of the rest of the bowel and differs from it only in that here the muscularis mucosa is somewhat more developed than in other parts of the rectum. According to Martin, the submucosa contains fibrous tissue, and he maintains that the presence of this tissue is a prime factor in constipation which results from hypertrophy of the valves.

Pennington, who has done much original work along this line, claims that in a series of experiments which he made, the circular layer was found to extend well into the valves, being much thicker here than elsewhere, while the longitudinal fibers were found to be present less often than the circular, sometimes passing over the base of the valve and at other times dipping into the depressions formed by the entrance of circular fibers into the valve.

Function of the Valves.

It is generally agreed that the principal function of the valves is the support which they give to the fecal mass in its descent through the lower part of the alimentary canal.

By reason of their arrangement and structure the valves impart sort of a rotary or corkscrew motion and presenting as they do an inclined plane appearance, the feces pass from the sigmoid and are deposited upon the upper surface of the superior valve, from which they glide gradually downward to the upper surface of the middle valve: in the same manner they are passed from here on to the upper surface of the inferior valve and thence into the rectum. It will thus be seen that the valves prevent a too rapid descent of the feces and the gradual downward passage of the latter gives the sphincters and levator ani muscles warning of their approach.

In this connection, attention might be called to some interesting experiments which are reported by Pennington and Martin. Lubricated cotton balls were deposited in the sigmoid and their descent observed through a proctoscope. These balls were seen to pass from the sigmoid on to the surface of the first valve, and by means of the rotary or corkscrew motion referred to in connection with the descent of feces, were passed on to the next valve and in like manner on to the lower valve and finally into the mouth of the proctoscope.

We have seen that when the valves become hypertrophied they act as a barrier to the descent of feces, in addition to being a fruitful cause of stricture, fecal impaction, constipation, etc. This naturally brings us down to the question of operating for conditions of this sort.

Martin was the first to devise the operation known as valvotomy for hypertrophied valves. His method was somewhat as follows: The usual preliminary preparations for an operation having been made, the patient is placed on the operating table in the knee chest position and with the aid of a good strong light, either direct or reflected, a proctoscope of fairly good size caliber is introduced up to the offending valve. The valve is then grasped on either side of the point where the incision is to be made by a long tenaculum and with a curve-point bistoury (designed by Dr. Martin for this use) the valve is transfixed, this initial incision being rather superficial. A scalpel, which he has also devised for this use, is then employed to carry the incision to the depth he desires. It should be stated here that Martin advises the use of a proctoscope that will just reach up to the valve to be incised. The incision should be made with the valve at right angles to the wall of the rectum, and the use of a proctoscope of the proper length will obviate the necessity of dragging the valve out

of its position down into the mouth of the instrument.

Formerly if any hemorrhage occurred, he applied temporary clamps, but he later resorted to the use of sutures in bringing the severed edges of the mucous membrane together. Inasmuch as Martin states that he never had a severe hemorrhage follow this operation, it is questionable if the use of sutures is advisable, since it is obviously a difficult matter to secure primary union in this location. After the operation, the wound is looked after and treated according to requirements, and after a few days massage or divulsion of the valve may be necessary.

The other operation is by means of a clip devised by Pennington, which was later modified by Gant, by means of which, through gradual pressure, necrosis of the tissues is brought about. In this manner hemorrhage is avoided and the two layers of mucous membrane are brought together in such a manner that danger of perforation and subsequent peritonitis is avoided.

Gant gives the following description of this operation: "After the rectum has been thoroughly cleansed, place the patient in the knee chest position and divulse the sphincter with Kelly's Conical dilator. A large proctoscope of suitable length is now introduced and the rectum allowed to become inflated, exposing the valve. The proctoscope is so adjusted that the valve to be divided crosses in front of it at a right angle. A clamp, to which a long thread has been attached, is placed in the applicator and the screw so operated that it remains open. The instrument is then introduced through the proctoscope and the clamp slipped over the valve, when the screw in the end of the applicator is turned to the left until the clamp closes on the valve and is freed. The proctoscope is now removed and the string left hanging out of the rectum to prevent the

clamp being carried upward by reverse peristalsis when it has cut its way out."

Since writing this description of the clamp operation, Dr. Gant has improved his clamp applicator by adding a ratchet arrangement which greatly simplifies the operation inasmuch as it obviates the necessity of regulating the screw at the end of the applicator. He has evidently changed his mind to some extent in regard to reverse peristalsis, for during my association with him he did not attach the thread to the clamp in the manner referred to in his description of the operation, and in every case that I saw with him, the patient returned the clamp promptly within the specified time, usu-

ally five or six days.

As to the comparative merits of the incision and clamp operations, while Dr. Martin reports most excellent results from his method, the fact remains that the clamp is much the safer operation and producing as it does results at least as good as the other, it should in my mind be the operation of choice.

In conclusion it may be said that in cases where the operation is performed for the relief of constipation of long standing, it is likely to be a failure unless the patient's diet and habits are regulated and his mode of life arranged in a manner conducive to regular action on the part of the bowels.

Medical Treatment of Cholelithiasis.—DOCK, Ann Arbor, says that two things have contributed to put the treatment of cholelithiasis on a certain basis: First, Naunyn's demonstration that gallstones are chiefly due to infection and stagnation of bile, supplemented by Kramer's experiments showing that the colon and typhoid bacilli precipitate bile in the test tube, and, second, the revelations of the actual conditions by surgeons. Prevention must be limited practically to those who have a known tendency as shown by previous infection of the biliary tract. The measures required are generally well known. They consist in regular healthful habits as to diet, regulation of the bowels, moderate exercise, avoidance of tight clothing and anything that can cause congestion of the portal circulation. Systematic deep breathing is perhaps useful in overcoming such congestions. Among drugs, salicylates are probably of definite value as disinfectants and cholagogues, but they should be watched and stopped if undesirable effects appear. The presence of the stone is less important than the existence of the infection, and the therapeutic problem is not to lessen pain so much as to lessen inflammation and the attendant risks. The majority of the cases, in the attack, are not surgical, but they should be viewed with a surgical eye, and if the physician is unable to do this he should have a surgeon's

co-operation. For the attack, anodynes to relieve pain, but not to entirely becloud the clinical picture, are advised. Dock does not use chloroform in these cases. Local hot applications and the hot full bath are useful, but he prefers copious washing of the stomach with hot water or hot Carlsbad water, which, theoretically, should lessen congestion and act as a general sedative to the affected tissues. Rest so far as possible and movements of the bowels should be encouraged. The after-treatment depends on the suspected conditions in the biliary tract, and after the acute symptoms have passed especial attention should be given to the occurrence of bile in the urine or stools, leucocytosis, etc. Dock thinks the passage of gallstones out through the common duct a comparatively rare event and that in many cases in which this is supposed to have been the case perforation has actually occurred. Perforation can easily happen in the severer attacks of bilious colic, but he is also convinced that it sometimes occurs with symptoms so mild as to be overlooked at the time and only discovered by operation or autopsy. In conclusion, Dock expresses the opinion that olive oil may possibly be of some service in reducing gastric hyperacidity and hypermotility, thus improving intestinal digestion and relieving some of the symptoms.—*Jour. A. M. A.*, Oct. 26, 1907.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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DECEMBER

Editorial

Pleasing Signs of the Times.—Two papers have recently come to our notice which throw a gratifying light on the progress being made toward harmony between the warring schools of medicine.

Dr. Cabot's utterances¹ from our own side of the fence will be recognized by the candid and open-minded majority among us, to be a very well-composed and fairly accurate statement of the extent to which we have gone in laying aside our prejudices and forgetting our resentment of the exaggerated claims of the founders of homeopathy. To many it will seem that in his desire to do full justice he has allowed the scale to tip the other way, and that some of the resemblances he finds between our modern practice and treatment by similars are rather superficial; but few will deny the existence of a very general feeling that the real differences in theory and practice between the average homopath and ourselves are too small to keep us apart. In fact, considering the establishment in homeopathic colleges of courses in bacteriology, physiological chemistry, pathology, etc., the only real grievance we have left against any of that sect, except the very small fraction who still believe in the universality of Hahnemann's laws, is that they persist in remaining a sect: that practicing under the name of a cult which had its origin and excuse for ex-

istence in a belief in Hahnemann's ideas they refuse to be bound to the law of similars and minute doses, but use whatever medicines seem best to them in whatever way they please. In short, the attitude of most of us toward homeopathy has been that to attempt to treat all diseases by the law of similars is absurd, while to call oneself a homeopath and at the same time make free use of drugs and methods of treatment which bear no relation to the principles of homeopathy has a savor of hypocrisy. These facts as to our own position are familiar enough, but it will doubtless be a surprise to many to know how far so representative a homeopath as the President of the Homeopathic Medical Society of Michigan, Dr. Harold Wilson, felt free to go in the annual address before that society this spring²—an address so conspicuous for candor and open-mindedness, as well as for literary qualities, as to deserve very careful consideration. Briefly summarized, it discusses the changes in homeopathic practice, and its gradual alienation from the original theories of Hahnemann; treats quite as frankly as would any of us of the difference between the practice and the ostensible principles of the average homeopathic physician; demonstrates the absurdity of the present official definition of a homeopathic physician and suggests finally the following as a possible solution: "*A homeopathic physician is one who has studied the law of similia. The great field of medical learning being his, he may choose whatever drugs or methods will secure to his patient the greatest good.*" Certain sentences are too significant to leave unquoted. For example: "What does the homeopathic physician wish to do with all this (wide field of medical) learning, if he believes in the universality and sufficiency of the law of

1. Address before the Boston Homeopathic Medical Society, Nov. 1, 1906.

2. "The Homeopathic School—An Introspection." May 21, 1907.

similars? * * * Would it not be more generous to leave this learning to those who have created the most of it?" "It looks very much as if the (present) definition were made to fit the fact that most homeopaths do not believe homeopathy to be a system of medicine, but only a system of therapeutics, and even then limited in its application." Again we read: "Has the law of similars so little vitality that this law needs the constant support of organized effort to keep it alive? Do other natural laws require societies for their preservation? The time approaches when we must answer the problems that press upon us; must answer them with the utmost intelligence, fairness and honesty of which we are capable. As our ideals differ, so will our answers. If I believe that the law of similars is the most priceless jewel in our keeping and that our duty is not only to heal the sick, but to strive to carry the convictions of homeopathy onward until the whole world is converted, then there is no need to talk of compromises with the enemy. If, on the other hand, I believe that the law of similars is but a single fact in the domain of medical science; if, in short, I believe that my whole duty is to be a physician and to heal the sick, then I will consider whether these objects can best be attained by maintaining or by abolishing the school of medicine we now cherish."

The trend of these statements is obvious; their weight is the greater when one considers to whom they are made. Surely no one can accuse Dr. Wilson of hypocrisy.

It is easy to think that in place of his suggested definition, his own logic might have led him to say that the true homeopathic physician is one who believes in the universality and efficiency of the law of similars, and that for those others who have studied this law, and believe in its occasional application, the need of

clinging to a sect has long ceased to exist. We may say that the field of non-sectarian medicine is wide enough for everyone but the bigot, and there are no fences nor gates to bar the open-minded man who wishes to enter it; that those of our homeopathic brethren who feel the need of more breathing space than their own little enclosure affords, are always free to come out and join the rest of us in seeking the truth wherever we can find it. Easy to say, but is it true? Obviously, there must be reasons why Dr. Wilson and the many others who think as he does still call themselves homeopaths, and we may well ask ourselves whether much of the responsibility does not lie with us. Have we been wholly free from prejudice and bitterness? Have we been quick to recognize and eager to encourage any tendency in such men to free themselves from sectarian medicine by making the path easy for them, or have we thrown unnecessary and unreasonable obstacles in their way? Have we, in Michigan especially, welcomed them to our own societies, or have we rather practically excluded them by insisting on their compliance with almost impossible conditions? Is it wholly just; and if just, is it politic, to demand that a man who has spent a large part of his career in the ranks of homeopathy, and is bound by a network of professional and social relations shall sunder those bonds abruptly and violently before we will give him recognition? Would it not be wiser and more generous to concede every possible point? If, to use Dr. Wilson's words, "we are moved more by sweetness than by bitterness, more by toleration than by prejudice, and most of all by the highest and best that is in us," shall we not hasten the "social evolution in medicine which is destined some day to create out of the present discordant elements a concordant, unified and glorious profession"?

The Fees Paid for Life Insurance Examinations interest a large number of our readers. The question has been discussed in a number of county societies and, before the winter is over, should receive attention in others. In the October issue of the *Journal* appeared a list of companies paying the flat five-dollar fee and a number of letters regarding this list have been received. It seems that the *Sun Life Assurance Company* of Montreal and the *Union Central of Cincinnati* should not be included in the list. Unless we are mistaken, these companies are paying five dollars in some states. Several letters addressed to the medical director of the *Union Central* regarding the fees paid, have not been answered.

Doubt was expressed by several correspondents concerning the amount paid by the *Penn Mutual* of Philadelphia. This company should not have been included in the list, but we are glad to say is now eligible. The following letter has been received:

Medical Department

THE PENN MUTUAL LIFE INSURANCE
COMPANY, PHILADELPHIA.

Philadelphia, November 7, 1907.

Dear Doctor:

I desire to inform you that on and after November fifteenth, 1907, the Fees of the Company will be as follows:

For each complete examination, irrespective of age and amount (an analysis of the urine being required in every case), Five Dollars (\$5.00).

For microscopic examination of the urine when required, an additional fee of Five Dollars (\$5.00).

An examination by one physician covers all cases up to \$25,000 of insurance.

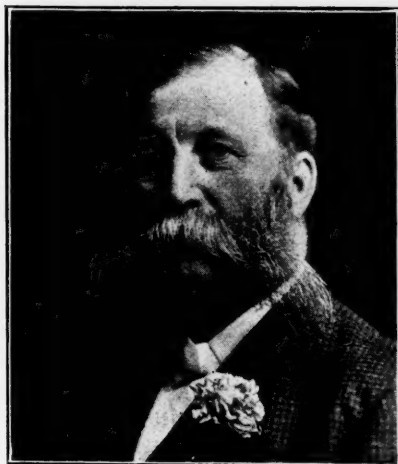
For amounts over \$25,000, up to and including \$50,000, one examination supplemented by a microscopic examination of urine is necessary.

For amounts in excess of \$50,000, complete examinations by two physicians, with microscopic examination by the senior examiner, are required.

Very truly yours,

OLIVER P. REX, M. D.

Medical Director.



Forty Years of Service.—Under the auspices of the Wayne County Medical Society, a complimentary dinner was tendered Dr. H. O. Walker, the eminent Detroit surgeon, on Wednesday evening, November 13, 1907. Nearly one hundred and fifty members and guests gathered to testify to their recognition of Dr. Walker's professional standing and to express their appreciation of their guest's accomplishments in the field of surgery during forty years of practice. Among those from out of town were Dr. J. W. Inches, of St. Clair; Dr. C. T. Southworth, of Monroe; Dr. S. I. Small, of Saginaw; Dr. H. E. Randall, of Lapeer; Dr. C. B. Burr, of Flint; Dr. W. F. Breakey, of Ann Arbor, and Dr. V. C. Vaughan, of Ann Arbor.

After an excellent dinner, Dr. J. H. Carstens, acting as toastmaster, called for the reading of letters from those who were unable to be present. Letters, filled with expressions of regard and appreciation, were read from a number of Wayne County members and from Dr. E. T. Abrams, of Dollar Bay; Dr. A. E. Bulson, of Jackson; Dr. G. C. Hafford, of Albion; Dr. Eugene Boise, of Grand Rapids; Dr. W. H. Sawyer, of Hillsdale; Dr. J. J. Reyecraft, of Petoskey; Dr. E. A. Christian, of Pontiac, and Dr. J. M. Matthews, of Louisville.

In introducing Dr. Walker, the toastmaster said that the gathering was the largest which had ever taken place in Detroit on such an occasion.

Dr. Walker said: A victim of an occasion like this is quite liable to incoordination of thought, therefore what I have to say I have committed to paper.

When I first received knowledge, while at Columbus attending the meeting of the Mississippi Valley Medical Association, that a dinner was to be given me in honor of my having practiced medicine and surgery for forty years, the thought occurred:—I wonder if the fellows of this society have had enough of me and this was a polite intimation that said, "Old fellow your time is up and you should be put away on the shelf." But afterwards I had another thought, and the thought is strengthened by the presence of so many of you here tonight, that it was an expression of your good will toward me, that in the strife for success in our profession there is in us much of the milk of human kindness, still a goodfellowship that over-balances our ambition, and we occasionally take a day off, and, as Whittier says, "To make the world within our reach somewhat the better for our living and gladder for our human speech." This is, however (with apologies to Dooley), not a "retirement ratification."

I wish to say at this time that I had never expected this, and I cannot express fully in words the gratification it affords me. It is a home coming that can never be effaced from memory. Forty years is a long time to look forward to, yet it seems but yesterday since I received my diploma from old Bellevue on February 28, 1867. The teachers, distinguished as they were of that time, are all dead but one, and he is an old man. (Austin Flint, Jr.)

Memories of instances and events crowd so thick and fast that time will but allow for a passing notice of them. The war of the rebellion had but just closed when I entered upon my professional career, and the country had only entered the career of unsurpassed prosperity in every line of professionalism and commercialism. A medical education at that time only required two courses of less than six months each with only one compulsory laboratory course, that of anatomy, with but a limited amount of preparatory education. There was no control of the practice of medicine; in fact any one might assume the title of doctor. To-day it is very much better,

and we have a four years' course of nine months each, with laboratory instruction in every department. Most State Boards of Registration require, as an entrance to the study of medicine, a high school course, while many of them have and are fast approaching a literary degree of high standard. No longer does a degree from a Medical College say that he who possesses it can practice medicine. This must be passed upon by a State Board. While crudities still exist, the advances are steadily increasing.

In 1867 anesthetics were about the only thing that we had, except rapid operative technique with a better anatomical knowledge than we have now. We knew gross pathology, but little of its microscopical appearances. Systematic and scientific antisepsis and asepsis did not commence until after ten years after this, with the development and better acquaintance of biology, comparative anatomy, physiological chemistry, normal and pathologic histology, bacteriology, and the use of allied sciences with their discoveries. Hospitals were few and far between.

I had the pleasure of being Secretary of this Society in 1869. The members at that time, as near as I can remember, were Drs. Zina Pitcher, a dignified practitioner of the old school and an ex-president of the American Medical Association; William Brodie, another ex-president of the American Medical Association, combative in nature, which was usually exercised in behalf of those oppressed, a man of goodly heart; Drs. E. W. Jenks, D. O. Farrand, George P. Andrews, S. P. Duffield and T. A. McGraw were also members. They were the beginners in teaching advanced medicine and surgery, in establishing a preparatory school of medicine from which much has developed as to our standing and the making of this city a medical center.

Three of these distinguished gentlemen have passed away. Two are still with us. Dr. Duffield now reaping the earned laurels of retirement. Dr. McGraw, whose career is an open chapter, is still actively engaged in the practice of his profession. Drs. Moses Gunn and Samuel G. Armour were also members and eminent teachers in the department of medicine and surgery have long since passed away. Drs. Henry F. Lyster and H. E. Smith, who were then young men, and in whose offices most of our meetings were held at that time, are also numbered among the dead. There are some here who will remember Dr. Richard Inglis, a man who was good and beloved by every one who came in contact with him. He left an

impress that did much towards the advancement. Drs. Moses Gunn and Samuel G. Armour were members and others whose names I do not recall. In looking about me I see those in the prime of life, old acquaintances and friends that I knew when they first commenced. I have always prized their acquaintanceship and association. There are many others whom I knew before, and at the time of the commencement of their medical career. I have watched with pleasure their work and I have always felt that I could meet them as hale fellows well met. Others here are newcomers and have already shown that they are "lifters and not leaners." The medical profession of Detroit stands prominently in the front rank. I feel that whatever success that has come to me is largely due to you, and in closing I wish again to thank you for this expression of your regard for me.

The toasts responded to were. "Forty Years' Surgical Practice," T. A. McGraw; "Forty Years of Medicine in Detroit," J. Flintermann; "The University," V. C. Vaughan; "Detroit as a Medical Center," E. L. Shurley; "The Profession in Local History," Hal C. Wyman; "The Eye of the Surgeon," Eugene Smith; "H. O. Forty and Twenty Years Ago," Angus McLean; "The County Society," A. N. Collins; "Walker and the Young Surgeon," C. M. Stafford.

Many interesting anecdotes of earlier days in Detroit were related, and all of the speakers spoke of the many contributions with which Dr. Walker has enriched surgery; of his efforts in behalf of medical education; of his great capacity for work, and of his unswerving honesty and uprightness.

In honoring Dr. Walker, the Wayne County Society honored itself. The evening will long be remembered by the older members because of its pleasant reminiscences and by the younger because of the inspiration derived from the toasts.

The occurrence after laparotomy of marked distention of the upper abdominal zone, vomiting and collapse, points to acute dilatation of the stomach.

Book Notices

Diseases of the Stomach. By Dr. I. Boas, Specialist in Gastro-enteric Diseases in Berlin. Authorized English-American Edition from the Latest German Edition. By Albert Bernheim, M. D. (Freiburg, Germany); Instructor in the Philadelphia Polyclinic. Five full-page plates and sixty-five engravings in the text. 730 Royal Octavo pages. Extra cloth, \$5.50. Sold only by subscription. F. A. Davis Company, Publishers, Philadelphia, 1907.

There are doubtless many physicians in America to whom an English translation of a standard text book by so widely recognized an authority in his specialty as Boas will be very welcome; and the present volume has one element of especial value to the general practitioner in that, while it treats fully and fairly of the conflicting views of other authorities, it is, after all, written from a decidedly personal view point and never fails to give a definite opinion as to the merits of the particular question under discussion, instead of leaving the reader to judge for himself from his more limited experience and smaller knowledge of the value of evidence.

The introduction contains chapters on the topographic and histologic anatomy and on the physiology and chemistry of the stomach, the latter of which seems very brief and incomplete for a book of such proportions.

The book proper consists of sections on methods of general examination, general therapeutics, and special diagnosis and therapeutics. The chapter on the anamnesis is well worth reading by anyone. The methods of chemical and physical examination are very fully discussed, and their practical application is made very clear. The chapter on diet contains valuable suggestions, and the whole subject of general therapeutics is treated with conspicuous common sense and little suggestion of faddism.

The section on special diagnostics and therapeutics is full and well arranged, and gives throughout evidence of wide experience and clear thinking.

Valuable as the book is in many ways, it has one defect so obvious that one wonders somewhat at its publication now. It is true as stated on the title page, that this is a translation of "the latest German edition," but one need not go far to see that "the latest German edition" was published in 1903, and that this volume contains no reference to literature of later date.

It needs but very slight consideration of the character and importance of recent researches on

secretion and metabolism and the decided effect that some of them must have upon both diagnosis and therapeutics of digestive disorders to show that this book is by no means so nearly up to date as any new publication should be.

The translation is on the whole good, and preserves the sense well, in spite of rather frequent transference of German idioms. The retention of certain spellings which are rapidly becoming obsolete in medical literature, such as the final "e" in *pepsine* and the diphthong in *haemorrhage*, seems unfortunate. The translator's interpolations cannot be said to add much value to the text.

Paper and print are excellent; illustrations not remarkable, with the exception of four skiagrams by Pfahler showing the movement of the stomach in gastropotosis.

Surgery: Its Principles and Practice. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M. D., LL.D., Hon. F. R. C. S., Eng. and Edin., Professor of the Principles of Surgery of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume II. Octavo of 920 pages, with 572 text-illustrations and 9 colored plates. W. B. Saunders Company, Philadelphia, 1907. Per volume: Cloth, \$7.00 net.

The second volume of this splendid work is devoted to the disease of the bones, the lymphatic system, skin, nerves and to orthopedic surgery.

Nichols of Harvard, writes the opening chapter on the histology and pathology of the bones. The important subjects of osteomyelitis, tuberculosis and syphilis are exhaustively treated. Tumors of the bones receive due attention. Fractures and dislocations are considered by Eisendrath, of Chicago; in a particularly practical manner; in fact we know of no treatise giving more clearly the diagnosis and treatment of these lesions than does this. The completeness of the discussion of fractures may be judged from the fact that over 200 pages are devoted to their consideration.

Lovett and Morse contribute a classical chapter on the surgery of the joints. The diseases of the muscles, tendons and bursae are satisfactorily discussed by Binnie, of Kansas City.

One hundred and twenty pages seem a small amount of space in which to discuss orthopedic surgery, but Lovett, of Boston, has condensed the subject matter so successfully that it has suffered but little.

The surgery of the lymphatics is discussed by Gerrish, of Portland, and that of the skin by Fordyce, of New York. The pathology of surgical disorders of the nervous system is described, in

his usual masterful style, by Spiller, of Philadelphia. The operative treatment of these conditions will be considered in Volume III.

The surgery of the insane is described by Da Costa, and that of the spine by Woolsey, of New York.

We believe this volume to be even better than the first of the series. It is splendidly illustrated and the book work is the equal of any of the excellently printed and bound volumes issued by the publishers.

A Treatise on Fractures and Dislocations. By Lewis A. Stimson, B. A., M. D., Professor of Surgery in Cornell University Medical College, New York. New (5th) edition, thoroughly revised. Octavo, 847 pages, with 352 engravings and 52 plates. Cloth, \$5.00, net; leather, \$6.00 net; half morocco, \$6.50, net. Lea Brothers & Co., Philadelphia, 1907.

Stimson's work undoubtedly retains the excellences of its original edition, and a great deal has been done to bring it up to date. The author's own productive experience is a large factor, and his thorough descriptions of pathology and diagnosis are satisfying. Certain elements peculiar to the medical books of a generation ago still linger in this one, and invite the wish that it could be entirely recast in modern mold. For instance it is disappointing to have pages of unassailable text adorned by so few or so poor illustrations. Treatment especially could be elucidated more effectively by the use of photographs of procedures, apparatus, etc. Occasional omissions are noted, as for instance, failure to mention certain successful interdental splints, and the method of Lothrop in treating fractures of the superior maxilla.

These few flaws are not conspicuous, except that they occur in a work otherwise so good. It is still the most complete book on the subject that we possess, inspired with a conservatism that is well measured and with detail that is scholarly.

Electro-Therapeutics and Roentgen Rays. By Mihran Krikor Kassabian, M. D., Director of the Roentgen Ray Laboratory of Philadelphia Hospital. Octavo, 545 pages. Cloth, \$3.50. J. B. Lippincott Company, Philadelphia, 1907.

This valuable treatise upon a subject with which Dr. Kassabian is so familiar as a result of long and extensive experience, will be welcomed with special interest.

The work, as a whole, presents in a most concise and readable manner the different phases of

the subject at hand, and the 245 instructive plates lend an added interest.

Part first consist of 155 pages, divided into ten chapters. It deals with the subject of electrotherapeutics as applied in medicine. His concise definitions of electrical terms, as well as his plain explanations of the uses of electricity, therapeutically applied, make the book a very valuable reference to the student, as well as the physician whose work demands some knowledge of this subject.

A greater part of the work is devoted to Roentgen Rays, with a most interesting historical introduction. It is a descriptive treatise of the properties of Rays, the apparatus, their construction, the various means of application in diagnosis and disease. The accompanying plates assist materially in making the descriptions clear.

The chapter on "Forensic Medicine" is new and instructive, being a summary of various decisions in which several X-ray operators have been involved.

The appendix itself is invaluable, as it is a compendium of methods employed by the best authorities on the "Technic in Roentgen Ray Therapy."

Clinical Features on Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Prof. E. von Neusser. Authorized translation by Andrew MacFarlane, M. D. 5½ x 8 inches; 203 pages. E. B. Treat & Company, New York, 1907. \$1.50.

Under the alluring title of "Disorders of Respiration and Circulation" MacFarlane has translated a series of exceptional monographs by Prof. Edmund von Neusser, of Vienna.

The first of these clinical treatises deals exclusively with Dyspnea and Cyanosis. It differs from the ordinary text book in that it accentuates the study of the prominent symptoms that call for treatment in medical patients.

After reviewing the causes of respiration and the modern physiology on the regulation of the interchange of gases in the tissues, he takes up in series pathological conditions that give rise to dyspnea and cyanosis.

The book is divided into two parts, that dealing with diseases of the respiratory apparatus, and that concerning changes in the circulatory system. The latter is further subdivided into diseases of the heart itself; into conditions of the gastrointestinal tract that disturb the circulation; into acute infections; into poisons that affect the cen-

ters of respiration and circulation, as well as the blood current, and into constitutional diseases that have some indirect bearing on the circulation and respiration. Although each chapter considers the treatment of each particular disease, the closing chapter takes up the general indications for therapy in dypnea and cyanosis.

It is an excellent volume, carefully translated and well published, offering important clinical and diagnostic features in a manner that is both novel and instructive.

The Practitioners' Visiting List for 1908. The Weekly, Monthly and 30-Patient Perpetual contain 22 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years. Price by mail, postpaid, to any address, \$1.25. Thumb-letter index, 25 cents extra. Lea Brothers & Co., Philadelphia.

This popular visiting list has appeared for 1908, being the 22nd year of its issue. It contains a scheme for dentition; comparative tables of weights and measures; methods of urine examination; diagnostic table of eruptive fevers; incompatibles, poisons and antidotes; dose tables, etc.

It is issued in four styles to meet the requirements of every practitioner: "Weekly," dated for 30 patients; "Monthly," undated, for 120 patients per month; "Perpetual," undated, for 30 patients weekly per year, and "60 Patients," undated, for 60 patients weekly per year.

Being printed on tough paper and strongly bound in grained leather, it will stand the wear and tear of daily use for a year.

County Society News

SEVENTH DISTRICT.

The third annual meeting of the Seventh Michigan District was held at Bad Axe October 24. There were about thirty members present. After the meeting was called to order by the district counselor, Dr. Mortimer Willson, of Port Huron, the following papers were read: "Peri-anal and Peri-rectal Abscesses," by Dr. Wm. L. Dickinson, of Saginaw; "Extra-uterine Pregnancy," by Dr. W. J. Harrington, of Bad Axe; "The Insanities of Early Life," by Dr. H. Ostrander, of Kalamazoo; "Diseases of Joints," by Dr. H. E. Ran-

dall, of Lapeer; "Echinococcus Cyst of the Liver," by Dr. B. Friedlander, of Sebawaing. An enjoyable banquet was held in the evening, at which the following toasts were responded to: "An Organized Profession," by Dr. Herman Ostrander, President of the State Medical Society; "Hold Fast to the Ideal," by Dr. Mortimer Willson, Councilor of the District; "What I Saw in Europe," by Dr. W. L. Dickinson; "The Country Doctor," by Dr. F. S. Sellars; "The Doctor in Politics," by Dr. H. W. Pfaff. Dr. C. C. Clancy, of Port Huron, acted as toastmaster. At the afternoon session Dr. Chas. B. Morden was appointed chairman, and Dr. D. J. McColl secretary.

DANIEL CONBOY,
Sec. Huron Co. Med. Soc.

ELEVENTH DISTRICT.

The Eleventh Council District meeting was held at Muskegon Tuesday, November 12, 1907.

There was a fairly good attendance of physicians from the district outside of Muskegon-Oceana counties. There was also a good attendance from Grand Haven, Spring Lake, and Coopersville, by physicians at those places, although outside of the district, in response to invitations sent to them. The physicians of Muskegon and Oceana counties turned out in a good number and helped to make the meeting very successful.

All those who had been invited to take part in the program did all in their power to make the meeting successful, and not one number on the program was a disappointment in any way. The program as planned was fully carried out, with the exception of clinical demonstrations by Dr. Hirschman. These were necessarily omitted on account of their being no clinical material. Dr. Hirschman's paper was, however, quite thoroughly discussed and the clinical application of the methods of treatment was well brought out.

One of the interesting features of the program was that of Dr. Griffin's paper. The doctor gave a resumé of a recent outbreak in Oceana county of epidemic poliomyelitis. He showed seven or eight cases of this trouble in the different stages of paralysis following the acute attack.

The social features of the day were very much enjoyed. After assembling at the Century Club the physicians were taken in automobiles at 10:30 for a trip about the city to different points of

interest, terminating at Hackley Hospital at 12 o'clock.

At 12:30 an informal luncheon was served at Hackley Hospital, by the hospital, which was partaken of by about fifty guests.

At 1:30 the meeting was called to order in one of the wings of the hospital by Dr. J. F. Denslow, president of the local society. He introduced the Rev. Archibald Hadden, president of the Hackley Hospital Board of Trustees. After a welcoming address by Rev. Hadden, the regular scientific program was successfully carried out. The demonstrations on Opsonins by Dr. E. C. L. Miller, of Detroit, were very interesting, and the process was carried out step by step by him in such a careful and painstaking manner as to be easily comprehended and thoroughly understood by all present.

The paper by our State President, Dr. Ostrander, was a thoroughly comprehensive one and was listened to with intense interest. Dr. Garber presented a very interesting case of "Staphylococcal Infection of the Scrotum Necessitating Extensive Plastic Operation," with pathological specimen, showing entire scrotum which was sloughed off.

At the close of the meeting an enthusiastic vote of thanks was tendered to the hospital and to all those who had aided in making the meeting so successful.

Dr. W. T. Dodge, in behalf of the Montcalm and Mecosta Medical Societies, invited the Eleventh Council District to meet with them next year. The invitation was accepted with applause.

A very enjoyable dinner was given at the Century Club at 8 o'clock. Forty-three guests sat down and good speeches and a pleasant social time were enjoyed.

V. A. CHAPMAN,
Sec'y Muskegon-Oceana.

CALHOUN.

Battle Creek Medical Club.

Several times during the past year notice has been made in these columns of the post-graduate work being conducted in Battle Creek.

Last year (1906-7) we had twenty-four meetings at which we conducted a course devised by our own committee. Interest was so great and there was such a feeling of satisfaction manifested by the society that we organized from

among the members of the Calhoun County Medical Society, the Battle Creek Medical Club. This club is holding meetings in the parlors of the Nichols Hospital each Monday evening, at which we are following out the A. M. A. Program as elaborated by Dr. J. H. Blackburn, of Bowling Green, Ky.

An outline of this work appears weekly in the Journal of the A. M. A., and printed outlines will be cheerfully furnished by Dr. Blackburn.

In Battle Creek our Program Committee meets the first Monday of each month and assigns the work for the month following, thus giving each lecturer at least four weeks to prepare his subject. We endeavor to give subjects each time to men who have not been on the program, thus passing the work around and equalizing not only the burdens, but the honors.

Thus far this fall we have had eight meetings with an average attendance of about 25. The interest seems to be increasing rapidly. The papers are well handled and well discussed.

We invite other societies to take up this work, and would do anything in our power to aid them in doing so.

WILFRID HAUGHEY,
President Battle Creek Medical Club.

CLINTON.

At the annual meeting of the Clinton County Medical Society, Dr. J. E. Taylor was elected president; Dr. W. A. Scott, secretary-treasurer.

The meeting was well attended. Dr. O. B. Campbell, of Ovid, presented a paper on "Senile Gangrene." The names of those expected to read a paper and an alternate are printed on our monthly program for each month of the year. By this method we hope to always have a paper in readiness.

W. A. SCOTT, Sec'y.

EMMET.

Meeting of the Emmet County Medical Society was called to order, October 8, by the President, Geo. W. Nihart, and a large meeting was had. Representatives were here from many surrounding towns. The meeting was of interest because of members of the Charlevoix County Medical Society being present and wanting to

affiliate with Emmet, because of the peculiar geographical position of this county making it almost impossible to get together. A matter of Dr. John Peddin having a contract to attend families for \$2 per year whose head belongs to the Order of Eagles was taken up. As this is contrary to a resolution adopted by the society at its inception said member was found guilty, but a proviso to refrain from taking another contract was accepted and he was allowed to continue until December, the time being almost up.

Much interest was taken in a paper on "Appendicitis" read by the Secretary, Dr. John Reycraft, and a liberal discussion followed.

J. J. REYCRAFT, Sec'y.

APPENDICITIS.

J. J. REYCRAFT, M. D.

After having acquired knowledge of appendicitis second hand, I am now acquiring it by actual experience, and having had twenty-nine cases this year, none of which resulted fatally, I feel that I can, with some degree of assurance, speak on the subject.

I wish to operate and operate early on every case of appendicitis, light or severe, for which I am responsible, as I believe that better results are obtained by early operation than by waiting. Three weeks ago, I was called to attend a boy whom I was informed had eaten his breakfast as usual and became ill in the forenoon. That same night, at 10 o'clock, I opened the abdomen, found it filled with a milky fluid, and the appendix filled with pus. Oschner asks that all cases be prepared for three days before the operation, but by that time it was possible the funeral would have been held. Such men, by giving such advice, do untold mischief to timid operators. If we wait to see how the case will go, it may go wrong and be too late to do the operation and the patient will be almost sure to die, and the operation will be associated, in the minds of the laity, with death itself. If the physician is not prepared to operate, some one should be called in, who can and will operate. I see no need of dieting a patient before the operation, as the harm which can come in such a case is slight compared to what might come from delayed attendance.

Once having decided to operate, I go through the abdominal wall low down and out from McBurney's point, as I there find the wall thinner

and the appendix more often below the incision. It is never necessary to take out the intestine to reach the appendix, as it soon becomes as easy to know the appendix from the intestine as it is for one experienced to differentiate the after-birth from the walls of the womb, and so one finger will soon pull the appendix out of a very small hole. I usually tie off with braided silk and sew up. Should I find pus in the abdomen, I clean out the excess and go right on and pick up the appendix, as all the cases I have left have done badly and all I operated on did well. Always drain the pus cases, sewing up around the tube as though you were to close the wound entirely. I have had pus cases where the appendix lumen remained open and cornmeal gruel which I gave would come out of the tube as it was eaten, and yet the child would get well, heal up, and apparently suffer no bad results.

Patients after an operation should be given a liberal diet and allowed to be up early.

It is a crime to produce narcoses with chloroform or ether, as the vomiting that follows is very distressing and apt to disarrange matters and scatter the pus in pus cases. I have been using now for nine months hyoscin, cactin and morphine, from two to three tablets given hypodermically being sufficient and apparently producing no bad nor distressing symptoms.

A patient may be given water and food at once after waking.

HURON.

The Huron County Society, in separate session, on the date of the meeting of the Seventh Council District, elected its officers for the coming year as follows: President, Dr. A. M. Francis, Port Austin; Vice-President, Dr. M. C. McDonnell, Bad Axe; Secretary-Treasurer, Dr. Daniel Conboy, Bad Axe; Delegate, Dr. A. E. W. Yale, Bayport; Alternate, Dr. James E. Thompson, Elkton.

DANIEL CONBOY, Sec'y.

IONIA.

At a meeting of the Ionia County Society, held on October 17th, Dr. C. S. Cope read an historical paper of much local and state interest.

After picturing the Indian medicine man of 75 years ago, Dr. Cope said:

The first white man to practice medicine in the locality was Dr. William B. Lincoln, grand-sire to Dr. W. L. Barnes of our society. He came about 1833.

For the assistance of the secretaries who are to follow me, I have placed the foregoing on the society's books; in addition I have added the following necrology that will prove of interest and be of inestimable value as time goes by. The names appear as to seniority as nearly as I have been able to gather them. Some must have been omitted because of lack of data. These may be supplied later.

List of physicians (deceased) who have practiced in Ionia city and county:

Ionia City—William B. Lincoln, Norton Beckwith, Alanson Cornell, T. B. Benedict, David Arndt, Caleb H. Hammond, Mr. Ranney, Mr. Andrews, Fred K. Gundrum, Stanley Dolan, S. V. Romig, H. B. Barnes, S. F. Bayard, L. Joslin, Dr. James, Robert Logan, Chas. Bailey, J. G. Connor, W. B. Thomas, Henry Tremayne.

Portland—No record.

Belding—Dr. Romig was the first to practice there, followed later by Dr. Albert Conner.

Odessa—Dr. Kilpatrick was the pioneer physician.

Matherton—Dr. William Mather, 1849.

Muir—Besides W. B. Thomas, who practiced there before removing to Ionia, Drs. Lindsley, Lain, Ives, Halstead and Hollywood.

Lyons—Drs. John Jewett, David Kelley, B. M. Hutchinson, W. W. Walker, W. Z. Blanchard, Wm. Hugg, W. Webster, and Dr. Spaulding who but recently passed away after many years in practice there. For a long time Lyons contested with Ionia for the county seat, which may account for so many names of physicians at so early a period.

At Saranac, in 1842, were Drs. Rose and Taylor. Later John Brandt, Wm. Fisher in 1855, and Cyreneus Kelsey, 1858. About 1855 came Dr. Powers, who but recently passed away; Pomeroy, Kimberley, A. P. C. Jones, Dreskell and Minch.

Of Dr. George Pray, of Woodward Lake, it was truly said: "A good man has gone," when he not a decade since, was called from his long and useful labors in the northern part of this county. This necrological record is placed on

your books "Lest we forget" those who have preceded us and in whose footsteps we are surely following. Dr. Leartus Connor, of Detroit, is now engaged in gathering the history of the deceased of Michigan's physicians and where any physician has been found to have made any advancement in science, either medical or otherwise or has in any way distinguished himself above his fellows, to gather up these facts together with short biography and photo where possible and to have these published in book form intended for the library of every physician in the state of Michigan. If any one to whom this statement may come, is in possession of knowledge along these lines who can relate anything of importance concerning our deceased brothers of the medical profession he will confer a favor by sending a statement of the same to Dr. Connor, or if such facts be placed in my hands or in those of my successors in office we will take pleasure in forwarding the same.—*Ionia Daily Sentinel*.

KENT.

Kent county is starting the winter's work with renewed energy and spirit, and double our former attendance. We are not only having good papers and case reports coupled with free discussions, but are also commencing to take up and carry forth local work in this community.

Our committee on Public Health and Legislation is doing excellent work in collecting evidence and prosecuting illegal practitioners.

At our meeting on October 23, a committee of five was appointed, who shall be known as the "Milk Commission of the Kent County Medical Society," and who are to take the necessary steps to obtain the proper inspection and certification of milk in this city.

At our last meeting another committee of three was also appointed, to be known as the "Social Purity Committee," whose duty shall be to co-operate with all co-existing organizations to bring about a better state of social purity.

Our anti-tuberculosis committee is working with the Local Anti-Tuberculosis League and are planning a winter's course of lectures for the public.

From all this one cannot help but see that Kent county is looking forward to a profitable and busy winter.

F. C. WARNSHUIS,
Acting Secretary.

PRESQUE ISLE.

At the annual meeting of the Presque Isle County Medical Society, the officers for the coming year were elected as follows: President, Dr. V. W. Shirley, Onaway; vice-president, Dr. W. W. Arscott, Rogers City; secretary-treasurer, Dr. L. C. Kent, Onaway; delegate to the Manistee meeting of the State Society, Dr. John Young, Onaway; alternate, Dr. N. D. Monroe, Millersburg.
L. C. KENT, Sec'y.

SCHOOLCRAFT.

The regular annual meeting of the Schoolcraft County Medical Society was held in Manistique, October 30, 1907. The following officers were elected for the ensuing year: President, Dr. J. M. Sattler, Manistique; vice-president, Dr. S. S. Haeckwell, Blaney; secretary-treasurer, Dr. G. M. Livingston, Manistique; directors, Dr. D. W. Roos, Manistique, and Dr. John M. Lipson, Germfask.

Our society claims the distinction of being the youngest society in the state, also the honor of having the most perfect organization, every regular practicing physician in the county being a member of the County Medical Society.

G. M. LIVINGSTON, Sec'y.

(Since the organization of the Ontonagon Society and the Antrim Society, the Schoolcraft Society has ceased to be the youngest. The distinction of having every active physician in the county as a member, however, still belongs to the Schoolcraft Society alone.—Ed.)

WASHTENAW.

The October meeting of the Washtenaw County Society was held at Dr. James Breakey's office.

Dr. C. G. Darling read a paper on the "Management of Certain Forms of Intestinal Obstruction." After reporting a number of cases to illustrate various types of obstruction he gave the operative method of treatment employed in each particular case. The difficulty of locating the obstruction was usually met by exploration. The indication would be to relieve the obstruction at this time if possible. This may be done by removing the cause, forming an anastomosis around

it, or making an artificial anus. Owing to great distention or the general bad condition of the patient at the time of the first operation, all of the necessary work sometimes cannot be done, but may be completed at a second operation.

Dr. Frank Smithies discussed the "Diagnostic and Therapeutic Use of Tuberculin." He urged the necessity for early diagnosis in all cases of tuberculosis, whether the process affects lungs or other parts of the body. In many cases this is impossible without the diagnostic injections of tuberculin. He has found the "old tuberculin" of Koch of sufficient practical value to insure its use. He prefers to give successive injections of one, five, or ten milligrams of the tuberculin at varying periods. He occasionally uses the "new tuberculin" (TR), but it is more expensive and the dosage is calculated with some difficulty. Of this the initial injection should be about 1/500 milligram.

Before giving the injections the temperature, taken every two hours for at least a day, should be proven about normal. If the injections are given in the evening, the patient should remain in bed all the next day. He should be taking no medicines. The local and general conditions after the injections should be carefully noted. In typical cases, the rise in temperature occurs within twelve hours after the injection. There are feelings of malaise, pains in the head, back and joints; loss of appetite and occasionally chilly feelings. There is usually a *local* exacerbation of the disease process, which should be looked for particularly. The reaction is usually over at the end of twenty-four hours. If no reaction is given with the initial injection of one milligram, then after a period of rest of about three days, a second injection of five milligrams should be given. If this produces no reaction, then after another rest period, ten milligrams should be injected. In all instances both local and general conditions should be observed. If there is any suspicion of a reaction, the injections should be repeated, and the patient watched more carefully. He has never seen any harmful effects of the reactions. In general, the reaction appears to be specific, although occasionally cases of syphilis, actinomycosis or leprosy respond.

Concerning the use of tuberculin for treatment, he said that in as many cases as possible the opsonic index of the patient should be taken as a guide for the injections. In some cases this was not possible. Injections once a week did not appear to be harmful in these cases. The "new

tuberculin" (TR) of Koch appeared to be the most satisfactory for the therapeutic injections, although good results had been claimed for the "bacilli emulsion" and the watery extract of von Ruck. In cases of pulmonary tuberculosis, injections of from one five-hundredth to one-tenth milligrams appeared to give good results, depending upon the cases. The dose should always be small at first and gradually increased, the rate of increase depending upon whether or not the patient shows any tendency to give a true tuberculin reaction. The possibility of cumulative effect should never be lost sight of. He cited the statistics of Meyer and von Ruck showing that the greatest good comes from the injections in early cases, where the possibility of secondary infection is small, but that nearly all cases are benefited, provided the injections are properly regulated. Cases of localized infection, wherever situated in the body, seem to respond more satisfactorily than cases of disseminated tuberculosis.

In concluding, he pleaded for the greater use of tuberculin for both diagnostic and therapeutic purposes; for the more careful regulation of the injections and for the accurate tabulation of data following the injections.

JOHN WILLIAM KEATING, Sec'y.

Correspondence.

Paris, September, 1907.

To the Editor.

I came to the continent nearly four weeks ago and have seen several very able operators. I have been unfortunate in not finding many of the professors in their clinics, being absent for their summer outing. At Bonn I had the pleasure of seeing Prof. Graff. He is a comparatively young man, about 35, but a bold and confident operator. He does most of his surgical work at the Marine Hospital, beautifully located on the mountain side, surrounded by garden and forest. At the time of my visit it was comfortably filled with patients. The hospital is well equipped and the sanitary conditions ideal.

At Heidelberg, Lucerne and Geneva, only the assistant professors were at the clinics, and their work for the most part was good.

In Paris one can spend his time very advantageously in the hospitals. I found especial pleasure in seeing the work being done by Prof. Pozzi

at the Hospital Broca, where only diseases of women are cared for. He impresses one as a man who has genuine interest in his work, and has the faculty of conveying his ideas to others tersely and clearly.

Among many others of the faculty I met Prof. Doyen, who is doing some beautiful surgery, especially of a plastic nature, and whom I found a most charming man.

The French Surgical Congress met here this week, and some interesting discussions on surgical methods were well worth hearing. Dr. Keating Host, of Marseilles, demonstrated his method of high tension, high frequency current in the treatment of epithelioma and carcinoma uteri in which the results have been remarkable. He was assisted by Dr. Loewy, of Paris. Dr. Hart is a remarkably clever Frenchman of Irish derivation, and very enthusiastic over the new method of treatment, as indeed one would expect. He uses a voltage of over half a million for two or three minutes, with an intermission of the same duration. Then the curette is used to remove the eroded tissue and the electrode again applied until all the diseased tissue is removed. By this method it makes possible the cure of many inoperable cases by any other method. At the clinics I met Dr. Arthur H. Bradley, of St. Louis, Mo., and Dr. Jean F. Wolfs, of Brooklyn, N. Y. Tomorrow I leave for London, and hope to spend next week with Dr. Moynihan, of Leeds, England, and Dr. Thomas, of Liverpool.

O. S. ARMSTRONG.

Leeds, October 18, 1907.

To the Editor.

After my letter from Paris to the Journal last week, Dr. Doyen discussed his method of treating cancer at Saturday's session of the Surgical Congress. He says the treatment of cancer should be both local and general and that Professor Wright, of London, has solved the general treatment by his method of vaccination with cultures of micrococcus neoformans, which has given such remarkably good results. To Professor Metchnikoff, by his discovery of phagocytosis, he gives the credit of furnishing us with the key, what we know of its pathology, and says the human organism has only one defensive process, whatever the bacterial poison may be, and that is phagocytosis. Cure results from the victory of the phagocytes in their battle with pathogenic bacteria and death from their defeat. Un-

derstanding this principle, the question of the treatment of cancer can be grasped more clearly. Many individuals present relative immunity from the disease, and this immunity may be acquired artificially in many others by anti-cancer vaccination either alone or combined with X-rays, electric sparks or dipolar voltaization. The vaccination increases the activity of the phagocytes and the physical agents assist them by lessening the virulence of the cancer cell, which otherwise, when very vigorous, would successfully resist the phagocytes.

This week I am seeing with great interest the clever surgery of Mr. Moynihan at the Leeds Infirmary.

O. S. ARMSTRONG.

News

Numerous cases of typhoid fever are reported in Kalamazoo and in Farmington.

The State Sanatorium for Tuberculosis will soon be able to care for 30 patients.

Dr. Frank P. Kenyon, Plymouth, has sold his practice to Dr. Samuel E. Campbell, Hancock; Dr. Kenyon intends to reside henceforth in California.

Dr. George P. Raynale is to take up practice at Harbor Beach, moving from Birmingham.

An interesting trial has recently been held in Detroit concerning the site proposed by the Board of Health for the Contagious Disease Hospital. Residents in the vicinity of the site, seek a permanent injunction, and obtained the testimony of numerous physicians that disease would be spread to families living near. On the other hand voluminous and weighty testimony was adduced to the contrary, and a decision is now awaited.

Dr. H. Beach Morse has removed from Elk Rapids to Bay City.

Dr. B. H. McMullen is mayor of Cadillac.

Dr. Mary G. Haskins, of Detroit, is taking post-graduate work in Philadelphia.

Dr. J. D. Monroe has removed from Harrisville to Elkton.

A new position on the interne staff of St. Mary's Hospital, Detroit, has been created. The interne will give exclusive attention to internal medicine and will be appointed until June, 1909.

Applications should be made to Dr. A. P. Biddle.

Dr. P. J. Livingstone, formerly of Caro, has opened an office in the Fine Arts Building, Detroit, and will devote his time to ophthalmology and otology.

Dr. G. V. Brown has removed his office from the Gladwin to the Fine Arts building, Detroit.

The office of the State Board of Registration in Medicine has been removed to 504 Washington Arcade, Detroit.

Marriages

Benjamin P. Brodie, M. D., Detroit, to Mrs. Austin D. Tubbs, of Washington, November 14.

H. A. Stuart, M. D., of Alba, to Miss Anna Vandecar, of North Barnch, at the home of the bride, October 23rd.

Wallace J. Smith, M. D., of Cadillac, to Miss Maud Ferguson Dean, of Detroit, October 30.

Simon Levin, M. D., of Lake Linden, to Miss Laura Schrader, of Chicago, October 21.

Raymond A. Clifford, M. D., Ypsilanti, to Miss Lorinda Smith, Mariette, October 15.

James A. King, M. D., Manistee, to Miss Minnie Billington, Cadillac, recently.

Deaths

John S. Ingram, M. D., of Grand Rapids, a retired physician, formerly practicing in Bailey, died at his home, August 3.

Edward R. Jebb, M. D., Battle Creek, met sudden death on October 3, falling down stairs and sustaining a broken neck, aged 53.

Josephine Kingsley, M. D., a graduate of the University of Michigan, Department of Medicine and Surgery, 1873, formerly for five years house physician in the Woman's Hospital, of Detroit, died at her home in San Antonio, Texas, October 13, from heart disease, aged 63.

John Laton Tuttle, M. D., of Clinton, is reported to have died recently, aged 58.

George B. Hammond, M. D., of Royal Oak,

died at his home from stomach disease, October 22, aged 40.

Albert M. Wheeler, M. D., of Houghton, died at his home from paralysis, November 1, aged 48.

Dr. W. J. Bachelor, of Oxford, died at his home, November 26, after a four days' illness. Dr. Bachelor, who was 58 years of age, had practiced in Oxford for 30 years. He is survived by a son, Dr. John Bachelor, also of Oxford.

Dr. Robert Morris, for a number of years coroner of Tuscola County, and health officer of the city of Vassar, died at his home November 27. He is survived by two sons, Dr. H. R. Morris, of Sebawaing, and Dr. H. L. Morris, of Saginaw.

Dr. S. I. Small, formerly councillor from the Eighth District, died suddenly at his home in Saginaw November 23. An obituary notice written by Dr. Small's intimate friends, will appear in the January Journal.

When replacing the uterus in cases of complete prolapse, reduce first the posterior vaginal wall, then the uterus and lastly the anterior wall.

A small incision and the proper employment of Bier's breast cup will secure exceedingly gratifying results in the management of breast abscesses.

A perforated intestinal ulcer, especially if low down, may give all the signs and symptoms of acute appendicitis. A very high leucocyte count with a high percentage of polynuclears, and the presence of a large amount of fluid in the peritoneal cavity, accompanied by general rigidity, may suggest the diagnosis.

Ten grains of trional (or veronal) the night preceding an operation, and a quarter of a grain of morphin one hour before operation, will make an anesthesia easier and more complete and it will not be followed by the usual after-effects of a complete narcosis.

When there is sudden acute pain in the right abdomen accompanied by rigidity of the abdominal muscles and high fever, making a diagnosis of gall-bladder disease or appendicitis probable, a lesion of the kidney should not be excluded, especially if there is sharp pain on pressure in the right costovertebral angle.

Progress of Medical Science

MEDICINE

Conducted by

T. B. COOLEY, M. D.

Specific Bacilli in the Blood of Measles Patients.—GIARRI and CARLINI announce that they have succeeded in demonstrating in 21 out of 24 cases of measles in the prodromal and eruptive stages, a bacillus apparently identical with that found by Giarri and Picchi in the secretions of the nose and conjunctiva in this disease in 1901, practically the only difference being that the bacillus from the nose grows readily on some artificial media, while that from the blood was cultivated for only a few generations and with great difficulty. The bacilli resemble very closely Pfeiffer's influenza bacillus, and the authors recall the fact that several others have seen similar organisms occasionally in measles blood.—*Arch. f. Kinderheilkunde*. Vol. 46, p. 262.

Transmission of Pemphigus Neonatorum.—KOWEATZI records some interesting observations on an epidemic in the Frauenklinik of the Charité. Starting with a single child, the disease soon spread to 40 others under the care of the same nurse. These children were isolated and the nurse temporarily removed from service for disinfection. Other children which she had handled were not however, quarantined, but handed over to another nurse, and coming down a little later, transmitted the infection further through them to other children under their charge, etc. The demonstration of the carriage of the bacteria by the hands of these nurses could be made almost a mathematical certainty.—*Munch. med. Woch.*, Sept. 24, 1907.

Open Air Treatment of Acute Pneumonia.—RENNIE describes the results obtained by him with this method in the Royal Prince Alfred Hospital in Sydney. It was adopted with all of the cases admitted to his service during ten months—only 20 in all. He places the patient at once on the balcony or veranda of the hospital, and keeps him there night and day, screening the head of the bed from cold winds. Only one of the patients died, and this one was practically moribund on admission. There were some very grave cases among those that recovered. RENNIE believes the treatment to have a favorable effect on nearly all the symptoms. The pulse improves quickly, appetite is better, delirium is lessened, and sleep is more quiet. Drugs are seldom necessary. In this series the temperature never rose above 103.8°, and the crisis occurred in most cases in 2 to 3

days—in no case later than 7 days from the initial rigor. He considers his cases too few to be conclusive, but has seen no ill effects whatever, and thinks the treatment deserves extended trial. Complications, even bronchitis, he does not consider contra-indications.—*Brit. Med. Jour.*, Aug. 31, 1907.

Pain and Blood Pressure.—ANSHMAUN has studied this question with a view to determining the value of the reaction of the blood pressure to pain in the diagnosis of hysteria, simulation, and some other conditions. The discrepancies he seems to have demonstrated to be due chiefly to inaccurate measuring of the painful stimulus and to the difference in the point of application, agreeing with Grutzaer and Heidenhain, who found that the stimulus must be applied on or near a sensory nerve trunk. He employed a carefully measured faradic current, so applied as to avoid strong muscle contraction and changes in breathing. The stimulus must, for purposes of comparison, of course, be applied to corresponding nerve areas. He found, in persons with normal pain sensation, and in the normal areas of hysterical subjects a constant and very uniform rise in pressure. Patients with nervous disturbances of the circulation, with or without hypertension, show a greater rise, as do hysterical patients with vasomotor hyperexcitability. A still greater—often very great rise is produced in patients with hypertension due to organic disease, such as contracted kidney. In anesthesia or analgesia, due to organic nerve lesions there is no rise following electrical stimulation. In series of cases of hysterical analgesia and anesthesia the same results were obtained as in organic diseases—stimulation on the sound side being followed by increased pressure, while stimulation on the affected side causes no reaction. This he thinks may have a bearing on the pathology of hysteria. Simulated analgesia, on the other hand, gives the normal reaction. He speaks of the diagnostic value of the effect of spontaneous pain on the blood pressure, agreeing with Pal as to the increase in blood pressure during the gastric crisis of tabes, due perhaps to vasomotor cramp in the splanchnic area. He obtained similar results in bad colic, while in abdominal pain from other causes—ulcer and carcinoma, appendicitis, neuroses, cholelithiasis, etc.—the rise was slight or absent.—*Munch. med. Woch.*, Oct. 15, 1907.

SURGERY

Conducted by

MAX BALLIN, M. D.

Nerve Disassociation: A New Method for the Surgical Relief of Certain Painful or Paralytic Affections of Nerve Trunks.—BABCOCK writes a preliminary report giving the results obtained in treating certain forms of paralysis or paresthesia due to injury or inflammation of nerve trunks by isolating the affected part of the nerve. Technique of the operation is as follows: After sufficiently exposing the affected nerve through an incision, the nerve is isolated from adjacent tissues and a free longitudinal incision of the nerve sheath made. The sheath should be divided, if possible, well beyond the limits of the lesion. The nerve trunk is then lifted upon one or two fingers, held taut, and the nerve fibers carefully separated from each other by means of a small, sharp tenotome. Care is taken to divide as few nerve fibers as possible, although it is aimed to freely separate the nerve fibers from each other. As the nerve fibers become separated, the nerve is transformed from a rounded cord to a flat ribbon-like band of separated fibers. Of four cases in which an operative disassociation of nerve was carried out, three were for painful conditions, and these patients obtained marked relief by the operation. In all four there were paralytic symptoms, and in three of these cases there was an immediate decrease in the palsy following the neurolysis. For the present he concludes that the surgical disassociation of nerve fibers may be carried out without producing gross evidence of reduction in the conducting power of the nerve. Disassociation probably is not as apt to produce paralysis as thorough nerve stretching. In certain cases of neuritis, nerve disassociation is less dangerous and more potent in relieving symptoms than nerve stretching. In certain cases of motor paralysis following inflammation or injury of nerve trunks, disassociation may be followed by a remarkable and almost immediate return of some of the function. In the treatment of certain forms of peripheral paralysis due to interruptions of nerve paths by masses of fibrous or other tissue, the operation of nerve disassociation from its apparent safety and conservatism is deserving of trial. Especially it is warranted in cases of brachial birth palsy where no gross lesion is found in the nerve trunks or where extensive resections, anastomoses, or forms of nerve bridging by catgut or other foreign materials would otherwise be employed.—W. WAYNE BABCOCK, M. D. *Annals of Surgery*, November, 1907.

Gallduct-Bronchial Fistula Cured by Cholecystostomy.—Married woman, thirty-six years

old, had suffered for eighteen years from attacks of intestinal pain. Since six months, repeated attacks of gall-stone colics, icterus, chills and fever. The chills subsided, but colics and icterus persisted. In the gall-bladder region a distinct tumor is palpable. About five months after onset of these serious symptoms, the woman started coughing. A dullness developed over the lower part of the right lung. The sputum being first purulent, became after two weeks hemorrhagic, and suddenly great quantities of pure bile were expectorated, for instance, by coughing a few times patient raised as much as 8 oz. of bile. Patient was operated upon: Laparotomy (Kehr's incision for gall-bladder.) Gall-bladder was found very much adherent with stone in cystic duct, torsion of the gall-bladder caused pressure on common duct. In dissolving adhesions of gall-bladder, bile escapes from a perforation, the no doubt complicated communication between bile-ducts and lung through the diaphragm could not be demonstrated. The gall-bladder was drained; the discharge of bile through the bronchus stopped immediately after the operation.—DR. O. KLAUBER. *Archiv fuer Klinische Chirurgie*. Vol. 82, Part 2.

Pathology of Appendicitis.—Very exhaustive studies undertaken under the guidance of RECKLINGHAUSEN in the pathological laboratory at Strassburg have led the author to the following conclusions: Perforation of the appendix in the majority of cases occurs only after previous affections have damaged the wall of the appendix. Such affections are mainly stricture or obliteration of the cecal end of the appendix, and may be the remnant of a former acute attack or may be caused by purulent infiltration or by necrosis of the appendiceal wall or by both. In the majority of cases the infection starts inside of the appendix; an infection by the blood-current is possible, but it has not been possible to prove it anatomically. Perforation of the appendix can occur with and without the presence of concretions; the concretions contribute to causing perforation by obstructing the lumen of the appendix and rarely by causing decubitus of its wall. Sudden perforation of the appendix wall thinned by Hydrops of the Appendix is possible without acute inflammatory symptoms. Embolism of the main artery of the appendix—infarct—is a special cause of total gangrene of the appendix.—*Mitteilung aus den Grenzgebieten der Medizin und Chirurgie*. Vol. 17 Parts 1 and 2.

GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

Appendicitis Complicating the Puerperium.—

An interesting article on this important subject has been written by HILTON. Women who have had appendicitis are more prone to recurrent attacks during pregnancy, it is then considerably more fatal than at other times, and gestation must not be construed as a contraindication to radical operation. These points have become well established. The problems of appendicitis after child birth have, however, not received the attention which they deserve.

The time of the puerperium being shorter, the cases are fewer than during pregnancy. That many cases are overlooked is apparent, because all of the known cases have been reported since 1893, and about half since 1902.

There is a direct causal relationship between the two conditions both from an anatomic and a physiologic standpoint. The anatomic relationship consist in the displacement and contiguity of these organs during parturition, in the presence of the appendiculo-ovarian ligament, in the aberrant course of the ovarian vessels beneath the cecum (in some instances) and in the continuity of peritoneum and subperitoneal cellular tissues. Such anatomic relations invite an extension of inflammatory process from the one region into the other. While the surgical anatomy is well understood, the knowledge of pathology is meager, because it is gathered from a few cases.

There are 29 cases in the literature. Twenty-two began within 10 days following a full term delivery, and one within the same interval following an abortion. Six cases occurred from 20 days to eight weeks after labor. Aside from these 29 cases there are a few reported that had their beginning during labor.

It is very significant of an etiologic relationship between the puerperal state and the development of appendicitis, that of these 21 cases, 66 per cent developed between the second and the fourth day.

The author says that it is not necessary that the genitals transmit the infection. They may act mechanically by direct pressure, or by traction, causing embarrassment of the circulation, pressure necrosis, or the tearing open of an abscess wall. An inflamed appendix may transmit infection to the genitals, therefore, puerperal sepsis may have its source in a complicating appendicitis, instead of through the usual external agencies.

In six of the cases operation or postmortem ex-

amination revealed the appendix and some portion of the genitals bound together in a septic process.

The signs and symptoms of appendicitis at this time are the same as at other times. The difficulty is to appreciate their true significance. The pain may be regarded as "after pains." When septic infection of the right appendages is present, it may be quite impossible to make the diagnosis of involvement of the appendix.

The surest guide to an early diagnosis is extreme watchfulness on the part of the physician, and careful inquiry as to whether the patient has ever had symptoms of appendicitis.

The prognosis seems grave. Of 22 cases developing within ten days following labor, 10 died, a mortality of 45.5 per cent. Early surgical interference is the rational procedure. The high mortality in operated cases was among those that had been allowed to pass on to suppuration or perforation.—*Surg. Gyn. and Ob.* October, 1907.

Late Syphilis and Pregnancy.—F. BERINGER

and G. PEJU, state that the most frequent cause of abortion is syphilis. It is also a cause of hypertrophy of the placenta, vicious insertions, hydramnios, visceral lesions causing the early death of the infant, and various malformations compatible with life. It has an especially marked action on tissues in process of formation, and its influence may be exerted on the organism of mother or child. Another factor in the causation of abortion is the long period during which it can exercise its ravages. In the beginning of syphilis its effects are much more marked in producing abortion than later, and as the length of time since its inception increases its effects are less. Out of 90 cases observed by the authors there were 57 abortions with macerated fetus, five premature births, six hydramnios cases, three syphilitic infants, ten deaths at an early age, and only seven living children. The practical deductions from these considerations are that when pregnancy is interrupted the physician should seek for a history and marks of a previous syphilis, in the shape of pigmented scars, exostoses, and previous abortions. Treatment should be carried out for four years carefully. Syphilitics should be advised not to marry for several years, and every syphilitic patient should be submitted to a course of anti-syphilitic treatment before and during every pregnancy.—*Amer. Journal of Obstetrics.*

PATHOLOGY AND BACTERIOLOGY

Conducted by

C. S. OAKMAN, M. D.

Cystitic Lymphangioma of the Gastro-Colic Omentum.—F. B. WAKEFIELD of Oakland reports a case of the above condition in a child of four years. The cyst was the size of an adult head, broadly attached to the greater curvature of the stomach, and encroaching upon the anterior and posterior walls. It had apparently developed in the upper reflection of the gastro-colic omentum, was multilocular in type, though the bulk of it consisted of one large cyst-chamber; the walls were thin, fragile, smooth; the fluid was clear, straw-colored, neutral, containing in various places cholesterin crystals, blood, and semi-gelatinous material. The spaces were sometimes lined with flat epithelial-like cells; the walls resembled mesoblastic structure, with branching giant cells. WAKEFIELD finds no case in literature with this diagnosis, but mentions a few reports of similar conditions, less fully described, which were probably identical.—*Surgery, Gynecology, and Obstetrics*. August, 1907.

The Growth of Lymphosarcoma in Dogs. Summary of Recent Observations.—S. P. BEEBE, in researches conducted at the Loomis Laboratory, New York, has investigated an "infectious lymphosarcoma" occurring naturally on the genital organs of dogs, which can be transplanted to other dogs by subcutaneous "grafts." Although a few pathologists have termed the tissue an "Infectious granuloma," comparable to syphilis, BEEBE does not doubt that it is purely a neoplasm, because micro-organisms are not found characteristically, removal of tumor cells by filtration will prevent inoculation, and the temperature at which the inoculative material becomes inert does not correspond with usual bacterial phenomena. This tumor at first is benign, but later in its growth metastases occur, succeeded by cachexia and death. Extracts of the tumor have a hemolytic effect, and it is probable that the cachexia represents a stage of such proliferation of the tumors that the absorbed autolyzed tissue overcomes the individual's resistance.

Transplantation is effected by carrying a small piece of tumor tissue beneath the skin in a trocar or by subcutaneous injection of a saline emulsion of the tumor cells. The former method is the surer. Incubation increases the virulence, but a certain percentage of animals recover spontaneously and are then immune to implantations of the same tumor. However, an animal thus immunized may become susceptible again if anything occurs to diminish his general resistance.

BEEBE thinks that the blood of an animal may contain some expression of its immune condition, and it is possible perhaps to transfer this immunity to another animal; this belief is based on certain phases of the experiments in transplanting tumors in blood media and in results of transfusions.

In applying the ascertained facts to human pathology, it may be concluded that human tumors are no more infectious than those of dogs; human tumors may be transplantable, but there is no direct experimental evidence, and it cannot be claimed that certain houses or water-courses are sources of infection.—*Journal A. M. A.*, Nov. 2, 1907, p. 1492.

The Treatment of Experimental Tumors with Bacterial Toxins.—BEEBE and TRACY, supplementing their work of the foregoing article, experimented with bacterial toxins as a means of treating lymphosarcoma in dogs. This method is parallel to Coley's treatment of sarcoma in human beings. The bacteria used were *B. prodigiosus*, *Strept. pyogenes*, *Staph. pyogenes aureus*, and *B. coli communis*. The preparation consisted usually of sterile suspensions of the whole germ cells. It was endeavored to obtain accurate comparisons by measuring the nitrogen content of pure growths in each case; this does not measure the actual toxic proteid, but it gives an approximate estimation of dosage. The germs were used separately, and also a mixture of *B. prodig.* and *Strept. pyog.*, as well as certain extracted fractions of *B. prodig.*

The results showed undoubted destructive action on the tumor growths, and this was produced even when injections were made at a distance from the lesion. The combined toxins of *B. prodig.* and *Strept. pyog.* were the most effective, and the former seems to have a highly destructive action on neoplastic cells. The susceptibility of tumor cells may be due to the fact that in acquiring the property of infinite multiplication they lose the property of self-defense. Also, the absorption of dead tumor cells may produce an antibody which raises the resistance against cells not yet destroyed by the toxins. The disappearance of tumors was found to be a process of softening, sloughing, and absorption. If this was too rapid, through overdosage, the animals had severe reactions and lost weight. If the dosage was carefully regulated, however, there were no ill effects, and some dogs gained during treatment.—*Journ. A. M. A.*, Nov. 2, '07.

PHARMACOLOGY AND THERAPEUTICS

Conducted by

H. A. FREUND, M. D.

Intravenous Injection of Strophanthin.—HEDINGER reports, along with several cases of cardiac incompensation and myocarditis, his experience with intravenous injections of strophanthin. The injections are not given at regular intervals, but rather according to indications. Cardiac insufficiency alone is the criterion. If any of the symptoms become pronounced, then 1 mg. of strophanthin is aseptically introduced into a vein. The results are rapid and remarkable. The dyspnea and cyanosis, as well as the subjective symptoms, are benefited. The effects last over a long period. Hence it is essential never to give more than 1 mmg. in 24 hours.

All injections must be made under perfect aseptic conditions, for many of the slight rises of temperature and chills following its administration are believed to be due to infections.

The author believes that by this method dosage is more easily controlled and results are far better than come from the administration of digitalis by mouth.—*Munich. med. Woch.*, Oct. 7, 1907.

Effect of Baths and Sweating in Nephritis.—STRASSER and BLUMENKRANZ have made observations upon patients, suffering from different degrees of chronic parenchymatous nephritis, and find that baths at 34° C (93.2° F.), of one hour and a half's duration, always produce increased diuresis, and elimination of chlorides. There is also an increase in nitrogenous elimination, but it is variable and less marked. The effect is only produced on the day of the bath, and does not last into the succeeding days. It is supposed that there is an actual renal effect, apart from that on the circulation, and the bath treatment was combined with reduction of the intake of sodium chloride. In the case of a child suffering from acute scarlatinal hemorrhagic nephritis, milk diet and a daily bath of one hour's duration were prescribed. Three times in the course of treatment the bath was omitted, and the action, of the kidneys was at once influenced unfavorably. The opposite experience, obtained by increasing the supply of salt, showed that, in patients with chronic Bright's disease, diuresis is decreased, and the bath treatment afterwards brings about an exaggerated excretion of chlorides.

They conclude, therefore, that this treatment should be instituted forthwith when such cases present edema, or symptoms of uremia. It is easy to keep the bath at the proper temperature, by covering it with a sheet, and adding further supplies of hot water from time to time, after

letting some of the bath water run away. After the bath, the patient is put to bed, without being dried, well covered up, and left to rest for one or two hours. Two baths of one hour each a day is the most suitable dose. In patients with arterio-sclerosis and showing uremic symptoms, headache and nausea are produced.

Experiences with the electric light bath at 55° C. (131° F.), showed that in spite of an elimination by the skin of about 279 g., the quantity of urine was only reduced by 100 g., and on the ninth day of this treatment, edema of the face appeared with headache and nausea.

The authors consider that this shows that, when sweating is employed, it is necessary to avoid high temperature baths.—*Blatt für klin. Hydrotherapie*.

Rectal Feeding.—MOORE gives a careful review of the absorbability of various kinds of foods by the larger intestine. This is of extreme importance in the light of the frequency to which rectal feeding is resorted to in surgery, as well as medicine.

The amount of proteid that is absorbed from the large bowel, even under favorable circumstances, falls far short of the minimum requirement of the body. The result is always a greater or less breaking down of the tissue proteids to make up for the loss. The rectal administration of fats usually results in considerable absorption. This is especially the case when the fat is well emulsified, as in the yolk of egg. A great diversity of opinion exists on the absorbability of carbohydrates. Sugars, of course, are the most useful. The author recommends the employment of a 10% glucose solution, however, in all nutrient enemata.

Normal salt solution is readily absorbable, and is considered both the best vehicle for rectal feedings, as well as an aid to more complete absorption of other foods. Alcohol is a frequent constituent of nutrient enemata. It may be given in from 0.5 to 2 per cent solutions. It is also believed to facilitate absorption.

MOORE finds that in the average case rectal feeding results in progressive loss of weight. If this is carried on to a marked degree acetoneuria may result and become dangerous. Best results are to be obtained by the use of enemata composed of predigested proteids, of albumoses, or peptones in 10 per cent solution of yolk of egg, of glucose in 10 per cent concentration in a normal salt solution.—*Practitioner*, November, 1907.

PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

Epidemic Anterior Poliomyelitis.—PISEK, from a study of the recent large epidemic in and about New York city, finds that the epidemic form assumes a symptomatology at variance with the accepted ideas; its course is manifestly different and the prognosis, as to functional recovery, much better than in the sporadic cases hitherto coming under his observation.

The distinguishing features of the epidemic form, are the number of fatal cases, the prominence of pain as a symptom, the absence of convulsive seizures initiating the attack, the cerebral symptoms, the unusual parts of the body involved, and the rapid functional recovery in a good proportion of the cases.

The one symptom that produced the greatest amount of confusion in the recent epidemic was pain. This was a prominent symptom in every case under observation, and undoubtedly led in many instances to the mistaken diagnosis of rheumatism or neuritis. The classical description of the disease as given by Duchenne and Charcot does not emphasize this symptom sufficiently. A mild grade of pain is found to persist in certain cases, for a considerable period, and may be attributed to the relaxation in the joints which has taken place, due to the atonic musculature.

The cerebral symptoms observed were so marked as to resemble the initial stage of cerebrospinal-meningitis. In one of the writer's cases this uncertainty was cleared up by doing a lumbar puncture. The fluid was found to be sterile. Twelve hours after the puncture there was paralysis of the right upper extremity. After 36 hours, functional activity had returned. An internal strabismus is the only complication at the present writing.

A fatal case, seen for the first time on the second day of her illness, had an intense bulbar involvement with dysphagia, dysarthria and paralysis of all four extremities. Many of the children seen had an involvement of the extensor spinal group, and three cases especially confirm the opinion held by Remak that the parts paralyzed were functionally and not anatomically related.

PISEK says that unfortunately we are still groping in the dark as to treatment. Upon the theory that we have a toxemia to deal with, treatment should be directed towards elimination. Salines and high colonic irrigations with daily hot baths, have been used by the writer, during acute stage, the patient being disturbed as little as possible during the interval of treatment. Just as soon as the fever had subsided and retrogression of the paralysis was in evidence, the patient was given massage and light vibration treatment.

PISEK believes that these patients should be placed in the open air, and given a nourishing diet to conserve their musculature and thus aid in convalescence. Orthopedic measures should be instituted early.—*Pediatrics*, November, 1907.

Some Points in Infantile Tuberculosis.

HOLT believes that the frequency of pulmonary tuberculosis in infancy has not been fully appreciated, because we have not been accustomed to look for it with sufficient thoroughness. More careful application of our means of diagnosis has made possible the recognition of tuberculosis in many cases where otherwise it is likely to be overlooked, and has emphasized the fact that pulmonary tuberculosis is a very common disease in infants.

During the 19 months ending May 1, 1907, 67 cases of pulmonary tuberculosis were treated in the Babies' Hospital, 62 of these being infants under two years, and 15 under six months of age.

The diagnosis rested upon finding the bacilli in the sputum in 54 cases; upon postmortem findings in 10; and of the remaining three one had tuberculous meningitis; one reacted to the tuberculin test and the third gave typical clinical symptoms of pulmonary tuberculosis. In only one-half of these cases was there any consolidation in the lungs present at the time that the diagnosis was made, and in 9 cases there were no pulmonary signs whatever, the infants having been admitted for other conditions.

The method at present followed for obtaining the sputum and the one which has given the most satisfactory results is to excite a cough by irritating the throat, and then to catch the sputum brought into view upon a bit of gauze or muslin. The cough may be excited by a spoon or a tongue depressor, or better, by a small bit of muslin in the jaws of an artery clamp. Upon this the secretion is easily secured when it is brought into view by the cough. Muslin is better than gauze or absorbent cotton. Swabs prepared as suggested are placed by the child's bedside and when the nurse notices a severe paroxysm of coughing, the child is picked up, and, if possible, the sputum is obtained. Inversion during the paroxysm of coughing sometimes causes the infant to discharge a considerable mass of mucus into a sputum cup. By the procedure mentioned, it has not been found more difficult to obtain good sputum for examination than in the corresponding stages of the disease of adults.

The foregoing observations tend strongly to confirm one in the opinion that it is direct contagion which is responsible for most of the tuberculosis of infants rather than infection through milk or other food.—*Archives of Pediatrics*, September, 1907.

LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

A Plastic Operation for the Closure of the Septal Perforations.—HASELTINE reports four successful cases of closure of a septal perforation by an original method. The size of the perforation varied but in one case comprised practically the whole cartilaginous portion.

The technic is described as follows:

(1) The edges of the opening are carefully pared, and V-shaped sections are removed above and below to allow approximation of the vertical margins without wrinkling. This is done with scalpel, or with the Ballinger single-tine swivel knife.

(2) A vertical incision is made in the "septum mobile" and a flap is lifted backward to, and entirely around the perforation. This incision is placed far forward to make the widest possible flap anterior to the opening. It should extend upward to the nasal roof, and downward into the floor, and it is well to include in the flap some of the underlying cellular tissue. The elevation should be carried along the nasal floor to a point as far backward as the posterior border of the aperture.

(3) The muco-perichondrium of the opposite side is elevated entirely around the perforation and the bone or cartilage of its immediate border is removed. The swivel knife, bone forceps and chisel may all be useful here. The muco-periosteum of the distal side back of the opening is now elevated as for an extensive bony resection. This elevation must extend to the roof and into the nasal floor.

(4) A vertical curved incision with its concavity forward is made through the distal membrane far enough behind the aperture to produce a flap wider than its anterior-posterior diameter. This flap must be loosened until it can be drawn forward, and sutured to the anterior margin on the same side, or better still, overlapped without sutures.

(5) The proximal flap is slid backward to meet the posterior margin if possible, but not far enough to uncover the juncture of the opposite membranes. Special care must be directed to the upper apex where the sliding of the flaps upon each other is necessarily slight. The flaps are held in position and gently pressed together by delicate pads, and suitable packing, preference being given the Bernay tampon.—*The Laryngoscope*, October, '07.

The Eustachian Tubes in Infants and Young Children: Anatomical Differences as Compared

with the Adult Type: Bearing upon Tympanic Disease.—KERRISON summarizes the anatomical differences between the eustachian tube of the infant and the adult as follows: (1) It is much shorter, measuring not more than 14 or 15 mm. (33 to 38 in the adult). (2) The tympanic orifice and the calibre of the bony tube are quite as large as in the adult. (3) The two portions of the tube (cartilaginous and bony) are more nearly in the same straight line so that there is no demonstrable angle at their point of junction. (4) The whole tube is nearly horizontal in direction, so that while the pharyngeal orifice in the adult is on a lower level by 12 to 14 mm. than the tympanic orifice, it is on the same plain as the latter in the infant at term. (5) The pharyngeal mouth of the tube in the infant at term is on a level slightly below the hard palate; whereas in the adult it is some 10 mm. above the level of the hard palate. These physical peculiarities seem therefore rather favorable to the entrance of germs either from the current of inspired air or from the nasal secretions draining posteriorly into the pharynx.—*The Laryngoscope*, September, 1907.

Esophagoscopic Diagnosis.—STARCK calls attention to a diseased condition of the upper part of the esophagus not heretofore described, the diagnosis of which, however, is only possible with the esophagoscope. The patients, mostly young females, complain of a feeling of uneasiness and of irritation in the throat, and of slight pain and sticking, especially when swallowing hot food. Examination of the upper part of the esophagus shows two kinds of changes. Circumscribed wound changes, lentil sized, the covering mucous membrane rough, with infiltrated edges, sometimes paler than the surroundings, sometimes intensely injected are noticed. The other form consists of circumscribed projections of the wall with inflammatory mucous membrane changes. Sounding proves these places to be the painful points.—*Proceedings South German Laryngologists*, May, 1907.

Meningitis from Sphenoidal Empyema: Healing.—KANDER reports a case of meningitis cured by drainage of a sphenoidal empyema. Pus cells and cocci were found in the cerebrospinal fluid. Clinically, rigidity of the neck muscles, severe headache, muscle hyperesthesia, pupillary inequality, optic neuritis and vomiting were the salient diagnostic points.—*Monatschrift f. Ohren*, xli-8.

DERMATOLOGY AND SYPHILIS.

Conducted by

A. P. BIDDLE, M. D.

The Present Status of Our Knowledge of the Parasitology of Syphilis.—In the two years and four months that have elapsed since the publication of Schaudinn and Hoffmann's first paper, there has appeared an immense literature dealing with the etiology of syphilis. The great majority of the references are confirmatory of Schaudinn and Hoffmann's announcement of the presence of *Spirocheta pallida* in certain of the lesions of lues. A small fraction of the work attacks the correctness of this finding. Enough time has gone by and enough work has been done to make possible a summary of results, and an attempt at determining what conclusions one may draw concerning the present status of our knowledge of the parasitology of syphilis.

Lustgarten's bacillus, DeLisle's bacillus, the numerous other bacilli described in association with syphilis, as well as the parasites of Doehle, of Clarke, of Schüller, and of Horand, may safely be dismissed without discussion.

Has *spirocheta pallida* morphological characteristics sufficiently marked to permit the experienced observer to distinguish between it and other spiral organisms? Its extreme fineness, the looseness and regularity of its spirals, and its peculiar staining reaction, which makes it, at first, so difficult to see the Giemsa stained preparations, are not shared by any other organism thus far described. Further distinguishing characters are the peculiar motility and the lack of refractility in the living condition.

Granting that it is possible to differentiate *Spirocheta pallida* from other spiral organisms, there arises the question of its frequency in the lesions of syphilis. In earlier reports, a certain percentage of undoubted primary lesions examined, gave negative results. With increased experience this percentage has constantly decreased, until today the results of competent observers are positive in as large a proportion of cases as are the examinations for the tubercle bacillus in undoubted tuberculous lesions.

In condylomata, in buccal patches and in the early lesions of the cutaneous eruption, the results are equally constant. As the skin manifestations become older the organism is less frequently found. This may be due, in part, to the therapeutic treatment which the patient has received, in part, to a disappearance of the causative agent after the lesion is well established. That the organism does, however, occur in the late manifestations, cannot be doubted. In still later lesions, those of the tertiary stage, the findings are even more inconstant.

If one excepts two or three doubtful reports, the gummata of acquired syphilis have yielded uniformly negative results. An entire absence of spirochete in old necrotic gummata is to be expected. There is an exact parallel in the failure to find tubercle bacilli in old, encapsulated, case-

ous tubercles. An encapsulated gumma is no longer an essentially syphilitic lesion. The specific vascular change and the action of the spirocheta have resulted in caseation. If, in this necrosis, the organisms are also completely destroyed there results a chronic inflammatory formation of connective tissue due, not to living organisms, but to the presence of the necrotic material.

The question of the constant occurrence of *spirocheta pallida* has received its most brilliant answer in congenital syphilis. Here the organism has been uniformly found.

The comparatively small number of cases in which *spirocheta pallida* has been found in the blood during the secondary stage, is advanced by some as a reason for doubting the etiological relationship of the organism. The production of the rash in syphilis is the same sort of a process as the formation of rose-spots in typhoid fever. Everyone knows how difficult it is to prove the presence of typhoid bacilli in the circulating blood. Large amounts of blood are required and the small number of bacilli in this amount of blood must be allowed to grow out upon artificial media. It is impossible to find the bacilli in smears made directly from the blood. It is almost equally difficult to find *spirocheta pallida* in the circulating blood, because of the small number of organisms present in the blood at any one time.

In doubtful clinical cases the presence of the organism in smears made from primary and secondary lesions, would likewise render possible a certain and positive diagnosis. Just as is the case with other microscopic diagnoses, a negative result in an individual case may be valueless. The value of a negative finding will depend, in great measure, upon the experience of the microscopist and upon the technic employed by him.

The presence of undoubted examples of *spirocheta pallida* in smears from early primary lesions ought to influence the treatment and the clinical course of the disease. Heretofore the clinician has been dependent upon the appearance of secondary manifestations in order to establish a certain diagnosis, and, as a rule, treatment is delayed until this period.

Because it has thus far been impossible to obtain and grow the organism in pure culture, Koch's postulates are not susceptible of proof. However, the constant presence of the parasite in the lesions of syphilis, its presence only in syphilis and not in other diseases, its definite relationship to the pathological changes, its morphological characteristics, and its presence in the lesions of experimental syphilis of lower animals, furnish evidence to establish the etiological relationship of *spirocheta pallida* to syphilis.—OSCAR T. SCHULTZ, M. D. From the Pathological Laboratory of Western Reserve University, Cleveland, Ohio.

ORTHOPEDIC SURGERY

Conducted by

WILLIAM E. BLODGETT, M. D.

A Preliminary Report on the Relation of Albuminous Putrefaction in the Intestines to Arthritis Deformans (Rheumatoid Arthritis, Osteo Arthritis): Its Influence upon Treatment.—ANDREWS and HOKE, Atlanta, Ga., report decided improvement in apparently all types of chronic non-tuberculous arthritis by exclusive diet of fermented milk. Kefilac tablets were used to produce the lactic acid fermentation; and in one case three quarts in the twenty-four hours of milk thus fermented were given for 3½ months. Laxatives are used, and as the condition improves, bread stuffs and fresh vegetables allowed. The article continues as follows:

"The uniform improvement of the symptoms, however varied they may have been, the unvarying disappearance most usually of all the soft tissue thickening around the joints when these patients have been put on a fermented milk diet, demonstrates beyond the shadow of doubt that fermented milk diet is, par excellence, the food for these patients. It was taken without anything else by Case 1 for over one year. Patients tire quickly on any one form of diet, yet they all bear it well for a month or six weeks, and by allowing them a little change then, it is then easy to go back to the fermented milk.

"The stools and urine on a fermented milk diet may still show evidence of albuminous putrefaction, still the toxic effects lessen or disappear.

"There one must acknowledge that one comes against a great wall of ignorance: A lack of knowledge of the toxins produced by the putrefactive bacteria in the intestines, yet this much must be true that the putrefaction changes produced by the intestinal bacteria on fermented milk do not elaborate the toxins formed by the putrefactive decomposition of meat.

"This is certainly true clinically as is evidenced by not only the improvement in the general condition of the patient and of the joint inflammation, but by the fact that the daily slight rise of temperature disappears in a short while after these patients are put on fermented milk."—*Am. Jour. of Orthopedic Surg.*, July, 1907, pp. 61-72.

A Preliminary Report Upon Ten Cases of Chronic Joint Disease, Treated by Tuberculin Injections by Wright's Method.—In a study based on ten cases RIDLON, Chicago, comes to the following conclusions:

"A low tuberculo-opsonic index with local joint symptoms may be accepted as evidence of joint tuberculosis. But a practicably normal tuberculo-opsonic index, together with local joint symptoms, neither proves nor disproves joint tuberculosis.

"When the diagnosis of joint tuberculosis has been made a high tuberculo-opsonic index should be maintained, if possible.

"With a high tuberculo-opsonic index an oper-

ation for the removal of all or part of the local diseases may be undertaken; not so with a low index.

If use of the diseased joint lowers the opsonic index, the joint must be protected; if it does not lower the index, it may be permitted; if it raises the index it should be insisted upon.

"General elevation of the temperature following a tuberculin injection, indicates too large a dose. A persistent lowering of the index during treatment by tuberculin injection, indicates that the injection has been given at the wrong time, during what Wright calls the negative phase, instead of during the positive phase."

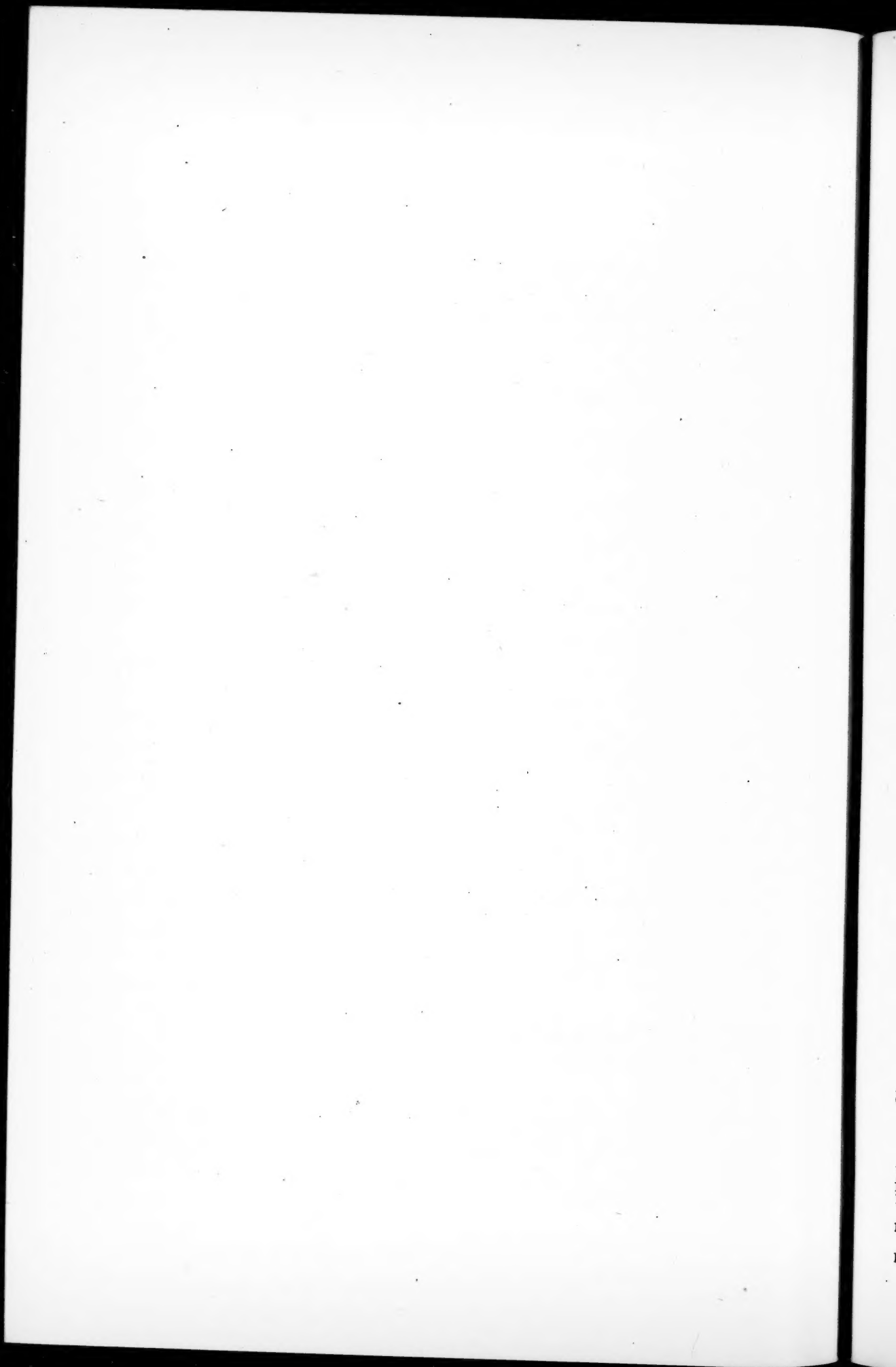
"While the time has been too short and the patients too few to predict ultimate results, the fact that the results thus far have been by no means brilliant, should be taken as encouraging rather than discouraging. I believe the tuberculo-injection treatment guided by the tuberculo-opsonic index to be a most promising step in advance in the treatment of tubercular joint disease."—*Am. Jour. Orthopedic Surg.*, July, 1907, Vol. 1, pp. 14-23.

Congenital Bends and Pseudoarthroses of the Leg.—E. GASNE states that these lesions appear as follows:

(1) Congenital bends of the tibia at junction of middle and lower thirds, without abnormal mobility; (2) forward bends as above, which upon slight injury develop into pseudoarthroses, that do not tend to heal; (3) congenital pseudoarthroses; (4) apparently normal condition at birth, followed, perhaps several years later by pseudoarthroses upon slight trauma. GASNE favors the theory of arrested development as the explanation of the condition. It is distinguished from intrauterine fracture by defect of the fibula (although the fibula may be normal with arrested development of the tibia), marked valgus and atrophy of the foot, and any other congenital malformation of the limb, as in the toes; the skin over the congenital bend often shows a tendency to a partly adherent cicatrization.

The treatment of slight congenital bends is by protective apparatus; forcible correction is liable to be followed by pseudoarthrosis. In severe cases, apparatus to provide for weight-bearing is needed, but is not well borne by the poorly nourished limb; a plastic bone operation may be tried, but it is often necessary to resort to amputation. In severe cases of pseudoarthrosis, apparatus or amputation is indicated; in pseudoarthrosis of medium grade, tenotomy of the tendo Achilles, straightening and local stimulating measures are called for; in cases of pseudoarthrosis with fairly solid bones, bone operations offer a fair chance of firm union.

Fifty-nine cases are cited and a bibliograpy added.—*Revue d'Orthopedie*, May and July, 1907.



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